KV-M19D/M19TD

RM-658 RM-657

SERVICE MANUAL

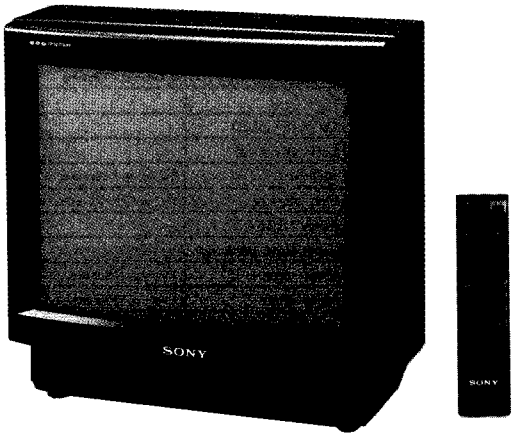
AEP Model

KV-M19D

Chassis No. SCC-B66C-A

KV-M19TD

Chassis No. SCC-B66D-A



BE-1 CHASSIS

Note: The service manual for RM-658 and RM-657 have been issued separately.

MODELS OF THE SAME SERIES	
KV-M19D/M19TD	

SPECIFICATIONS

Television system	CCIR B, G and H
Color system	PAL SECAM
Channel coverage	VHF E2 – S20 UHF E21 – E69
Picture tube	Trinitron tube 90° degree deflection Approx. 49.4cm (19 inches) (Approx.45.8cm picture measured diagonally)
Input	21 – pin connector : CENELEC standard AV connector
Output	Earphone jack : minijack 21 – pin connector : CENELEC standard
Power consumption	56Wh (KV-M19D) 61Wh (KV-M19TD)
Dimensions	Approx. 462×436.5×462.5mm (W/H/D)
Weight	Approx. 19.1kg
Supplied accessories	RM – 658 Remote Commander (1) (KV-M19D only) RM – 657 Remote Commander (1) (KV-M19TD only) IEC designation R6 batteries (2)
Sound output	3.5w (music power)

Design and specifications are subject to change without notice.

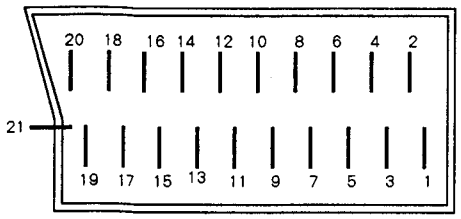
– Continued on page 2 –

MICROFILM

TRINITRON® COLOR TV

SONY®

21-pin Euro Connector Configuration



PIN	SIGNAL	SPECIFICATION
1	Audio output	0.5Vrms/1kilohm or less
2	Audio input	0.5Vrms/10kilohms or more
3	Audio output	0.5Vrms/1kilohm or less
4	Earth (audio)	
5	Earth (B-input)	
6	Audio input	0.5Vrms/10kilohms or more
7	B-input	0.7Vp-p/75ohms
8	Function switching	9.5V to 12V
9	Earth (G-input)	
10		
11	G-input	0.7Vp-p/75ohms
12		
13	Earth (R-input)	
14	Earth (blanking)	
15	R-input	0.7Vp-p/75ohms
16	Fast blanking	1V to 3V/75ohms
17	Earth (video)	
18	Earth (fast blanking)	
19	Video output	1Vp-p/75ohms
20	Video input	1Vp-p/75ohms
21	Screening plug	

TABLE OF CONTENTS

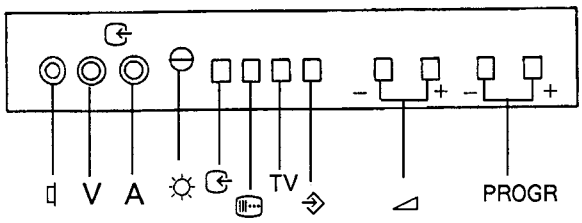
Section	Title	Page
1.	**GENERAL**	
1-1.	Function Of Controls	3
1-2.	On The Remote Commander	4
1-3.	To Preset Channels	4
1-4.	Viewing Teletext	5
2.	**DISASSEMBLY**	
2-1.	Rear Cover Removal	6
2-2.	B and V Board Removal	6
2-3.	Picture Tube Removal	7
2-4.	Service Position	8
3.	**SET-UP ADJUSTMENTS**	
3-1.	Beam Landing	9
3-2.	Convergence	10
3-3.	Focus	11
3-4.	White Balance	12
4.	**CIRCUIT ADJUSTMENTS**	
4-1.	B Board Adjustments	12
4-2.	D Board Adjustments	13
4-3.	V Board Adjustments	14
5.	**DIAGRAM**	
5-1.	Circuit Boards Location	15
5-2.	Schematic Diagram (1)	16
5-3.	Printed Wiring Boards (1)	19
	Schematic Diagram (2)	22
	Printed Wiring Boards (2)	25
5-4.	Semiconductors	28
6.	**EXPLODED VIEWS**	
6-1.	Chassis	29
6-2.	Bezel	30
7.	**ELECTRICAL PARTS LIST**	31

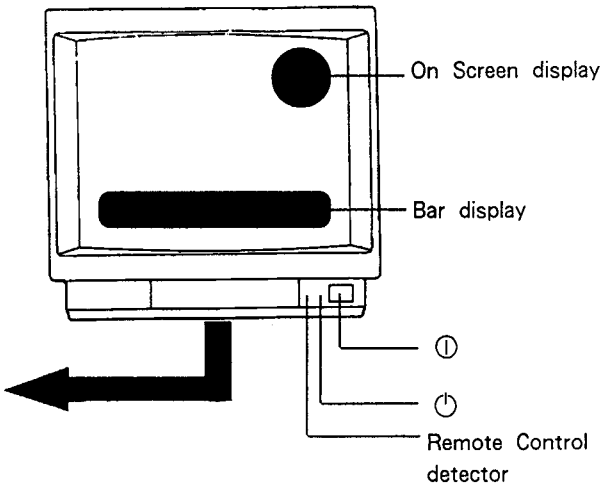
SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

1–1. FUNCTION OF CONTROLS





On the set

On-screen display
Indicates program numbers and input mode ; .
Press the button to make the display appear on the screen, and again to make it disappear. See also "On the Remote Commander" below.

Bar display
Indicates the level of the user controls when they are adjusted ; volume, contrast or color.

power switch
To cut off the main electricity supply, press this switch. Ensure correct operation by pressing the switch fully.

Remote control detector
Point the Remote Commander towards this detector.

standby indicator
Lights up brightly when the set is in standby mode.

Inside the panel

earphone jack (minijack mono)

preset button

analogue select buttons
Press repeatedly until the on-screen display of the required adjustment appears (volume, contrast or color). Adjust by using the + or – buttons.

input button
Press this button to view the input picture coming in through the 21-pin connector or the connectors on the front panel. " " appears on the screen. Press again or PROGR + / – to return to the TV mode.

Extra equipment can be connected to the TV using both the 21-pin connector and the input connectors, but only one piece of equipment besides the TV should be turned on at one time.

brightness control
Turn clockwise for more brightness or anticlockwise for less.

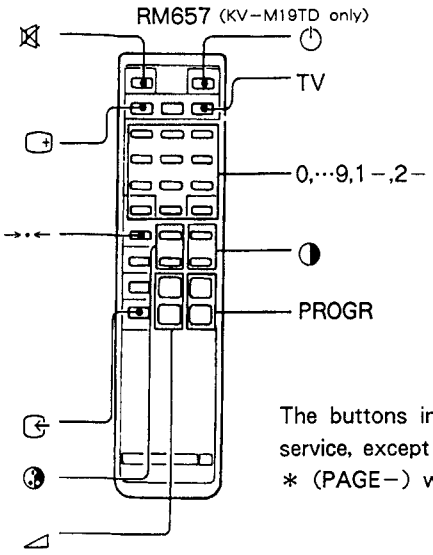
Volume adjustment buttons +/–
Use these buttons to adjust the volume to the desidered level.

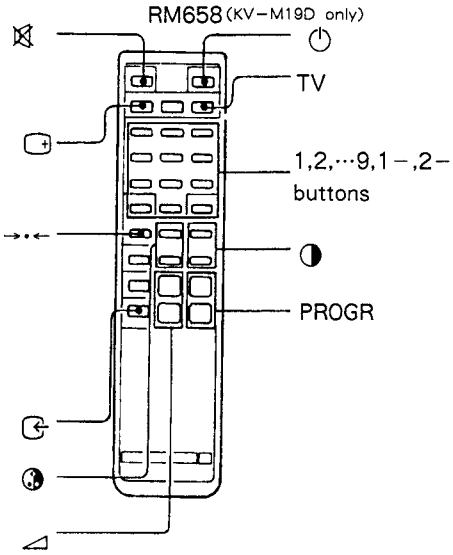
PROGR +/– buttons
Use to scan the available channels. To turn on the TV from standby mode without using the remote commander, press any of these buttons.

Video/Audio input connectors (phono)
Connect to a VTR, micro-computer, etc.
- V (Yellow) video input
- A (Black) audio input (mono)

Note
The TV button does not function on this set.

1–2. ON THE REMOTE COMMANDER





The buttons indicated in green are used for teletext service, except the buttons ∗ (PAGE+) and ∗ (PAGE–) which are indicated in white.

To operate the Commander, point it toward the remote control detector.

mute button
Use to mute the sound. Press + or to restore the sound.

0, ·····9, 1–, 2–buttons
To select :
program 15, press 1– and 5,
program 25, press 2– and 5.

→ • ← Reset button
Press to return color and contrast to factory-set levels.

standby button
Press to select standby mode. Use this facility to turn off the set for short periods of time.
To return to TV mode, press TV or the program number on the Remote Commander ; there will be a slight delay before the picture is restored. If the main power is turned off when in standby mode, the indicator will take 2 to 6 seconds to go off.

On-screen display button
Indicate the program number and the input mode. Press this button to make the display appear on the screen, and press the button again to make it disappear.

TV button (RM657 KV-M19TD only)
Press to change to the TV mode from standby, input modes.

PROGR+/– buttons
Use to scan the available channels.

+/– volume buttons

color buttons

contrast buttons

input button
Press to view the input picture from the connector or connectors. " " appears on the screen. Press PROGR +/– or a program number key to return to the TV mode.

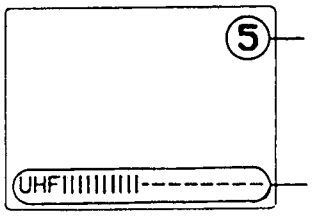
1–3. TO PRESET CHANNELS

Use the buttons inside the panel. To open the panel, push and pull the centre.

Manual Programing

To Tune in a Channel in Any Desired Program Position

1 Press (preset) to select the presetting mode.
2 Select the desired program position by using the PROGR + or – button.
3 Press + or – repeatedly until the TV program of the desired channel appears.
Repeat steps 2 and 3 for all desired channels.
4 Press again to return to the TV mode.



Program position flashes.

Indicates the approximate location in the band of the channel being tuned in.
The number of upright segments increase for a higher-frequency channel and decrease for a lower-frequency channel.

1-4. VIEWING TELETEXT (KV-M19TD only)

To view the teletext service, use the Remote Commander. RM-657 has teletext buttons indicated in green teletext operation are indicated in green.

Operation

1 Select the TV channel for the desired teletext service.
2 Press ▤/▤ (TEXT/MIX) to display the teletext service.
Once ▤/▤ has been pressed, the TV channel cannot be changed.
3 Key in the three digits for the desired page using the number buttons. If an error is made, complete the three digit sequence by keying in any digit. Then re-enter the correct page number. The requested teletext page is displayed.

To return to the TV mode, press TV on the Remote Commander.

The teletext service can be displayed directly from the standby mode, by pressing ▤/▤.

To receive the teletext service of a different TV channel.
1 Press TV to return to the TV mode.
2 Select the desired TV channel.
3 Press ▤/▤.

To display the index page.
Press ▤ (INDEX). If the necessary signal is not being broadcast, page 100 is displayed.

To access the next or preceding page
Press ▤ (PAGE+) or ▤ (PAGE−).
These buttons are indicated in white on the Commander.

To superimpose the teletext display on the TV picture.
Press ▤/▤ twice from TV mode.
Press ▤/▤ again to return to the TEXT display.

To suppress the teletext display so that the TV picture is displayed.
Press ▤ (TEXT CL). This button can be operated from both the TEXT and MIX displays.

To prevent a teletext page (subpage) from being updated /changed.
Press ▤ HOLD. The HOLD symbol "▤" appears at the top left of the screen.

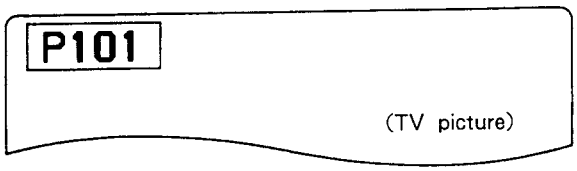
To resume normal teletext reception, press ▤/▤.

To enlarge the teletext display.
Press ▤. Press once to enlarge the upper half of the display; press again to enlarge the lower half of the display; press again to return to the normal display.

To reveal concealed infomation such as the answers to a quiz
Press ▤ (REVEAL)
Press again to conceal the answers.

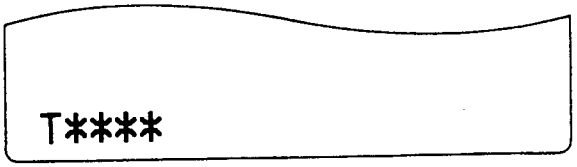
To adjust the contrast of the teletext display.
Press ◑ + or − button.

To watch the TV program while waiting for a requested page to be displayed.
1 Request the new page.
2 Press ▤ to watch the TV program. The requested page number appears at the top left of the screen.
When the requested page has been found, the page number is displayed on the top left hand corner of the screen.

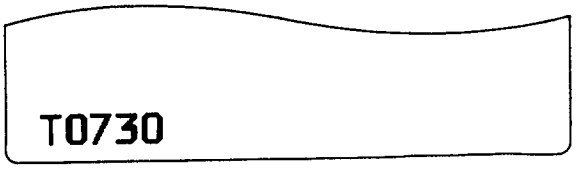


To view this page, press ▤/▤.

To have a requested page displayed at a pre-determined time.
1 Request a time coded page (e. g. alarm page).
2 Press ▤ (TP ON).
"T＊＊＊＊" will appear at the bottom of the screen.



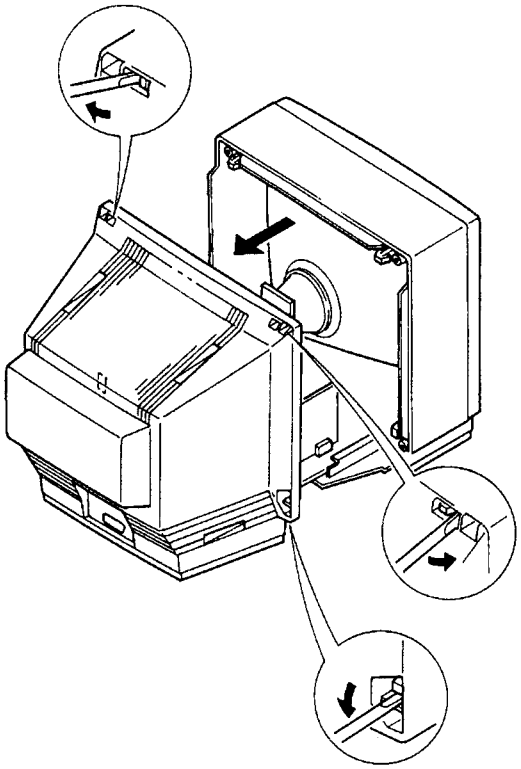
3 Enter your request time with the number buttons, using four digits. For example, 07 : 30.



To watch the TV program until the requested time, press ▤.
At the requested time, the page number will be displayed at the top of the screen.
To view this page, press ▤/▤.
To cancel the request, first ensure that the teletext page is displayed, then press ▤ (TP OFF).

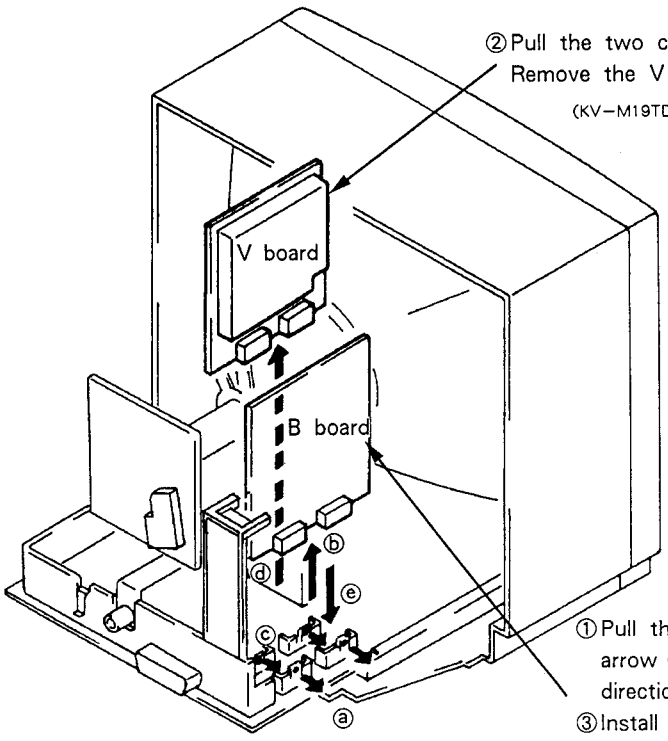
SECTION 2
DISASSEMBLY

2-1. REAR COVER REMOVAL



On the top of the rear cover, use a screwdriver to push the tab (circled in the figure) in the direction of the arrow to release the cover holder.

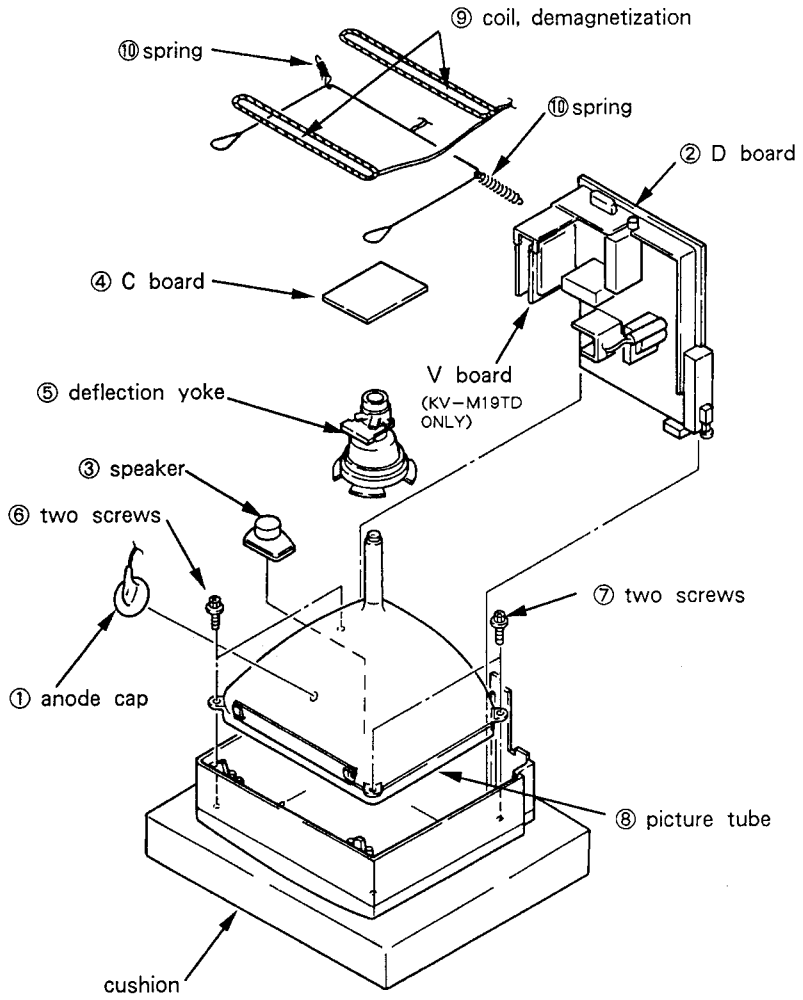
2-2. B AND V BOARD REMOVAL



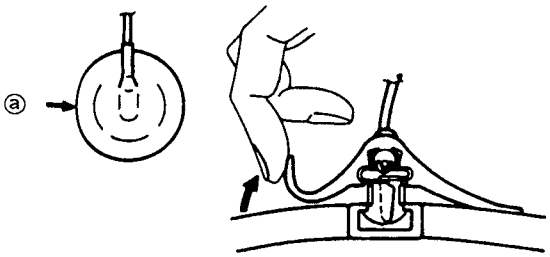
②Pull the two clips in the direction of arrow ⓒ. Remove the V board in the direction of arrow ⓓ.
(KV-M19TD ONLY)

①Pull the two clips in the direction of arrow ⓐ. Remove the B board in the direction of arrow ⓑ.
③Install the B board in the direction of arrow ⓔ.

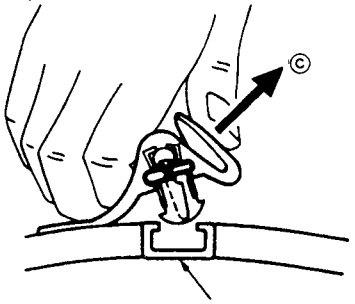
2-3. PICTURE TUBE REMOVAL

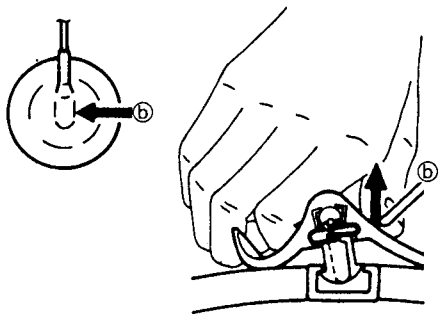


● **Removing Procedures**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.

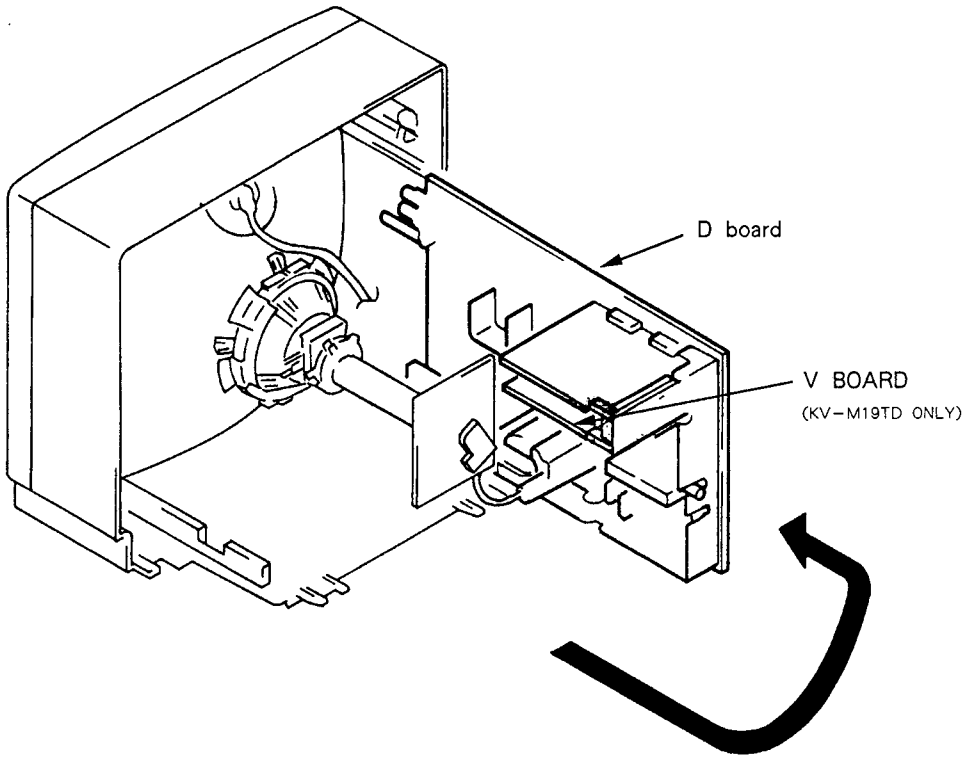




② Using a thumb,pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.

③ When one side of the rubber cap is separated from the anode button,the anode cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

2-4. SERVICE POSITION



SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The control and switch below should be set as follows unless otherwise noted :

◑CONTRAST control ····· 80% (or Normal by Commander)

☼BRIGHTNESS control ····· 50%

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color Bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

Preparation

- Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

3-1. BEAM LANDING

1. Input a raster signal with the pattern generator.
   CONTRAST } normal
   BRIGHTNESS }
2. Turn the raster signal of the pattern generator to red.
3. Move the deflection yoke backward, and adjust with the purity control so that red is in the center and blue and green are at the sides, evenly.
   (Fig. 3 - 1 — 3 - 3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes red.(Fig. 3 - 1)
5. Switch over the raster signal to blue and green and confirm the condition.
6. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.
7. When landing at the corners is not right, adjust by using the magnet.(Fig. 3 - 4)

Fig.3-1

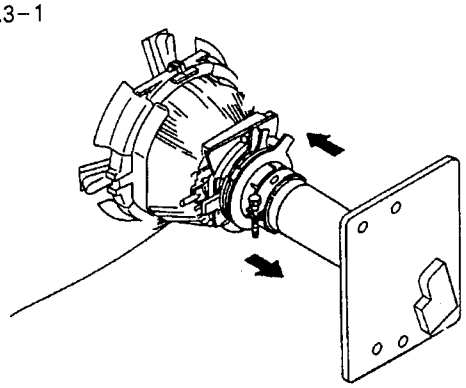


Fig.3-2

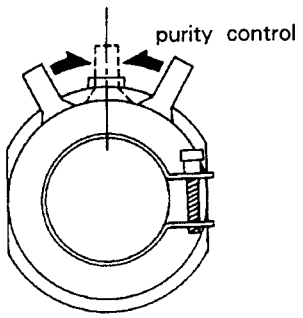


Fig.3-3

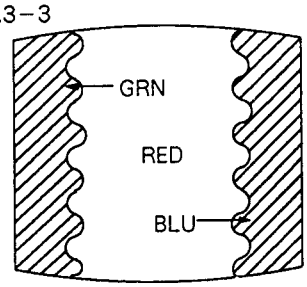
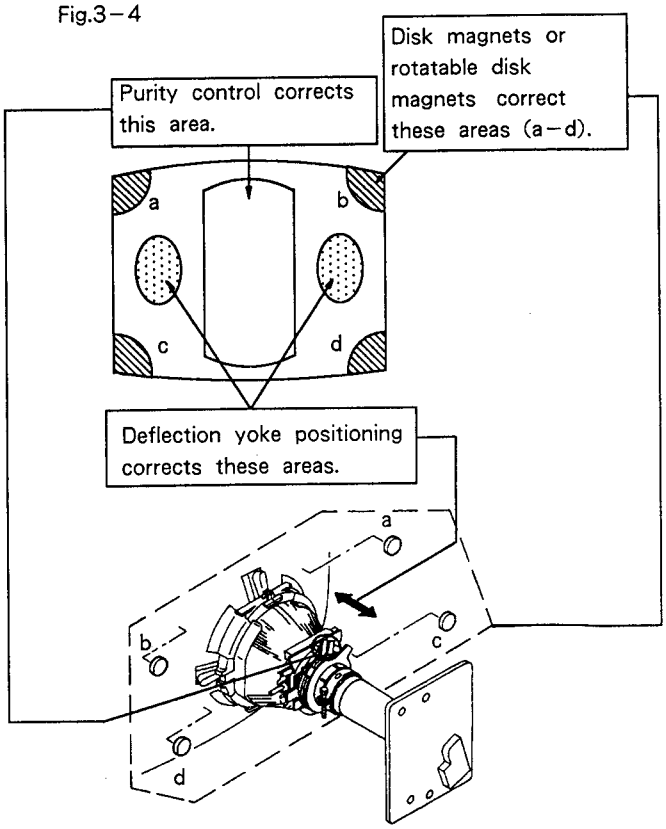


Fig.3-4

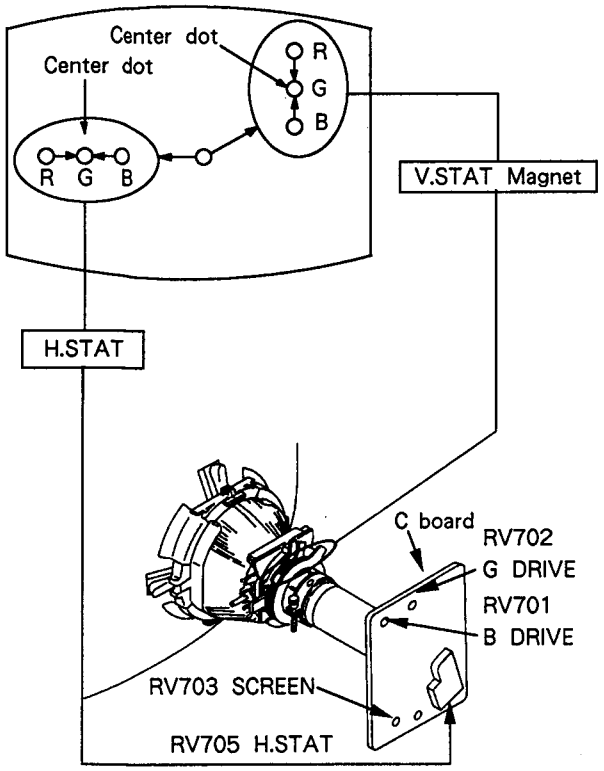


3–2. CONVERGENCE

Preparation :

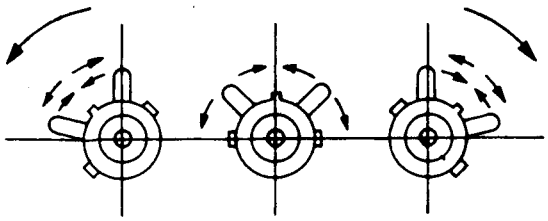
- Before starting, perform FOCUS, H. SIZE and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in the dot pattern.

(1) Horizontal and Vertical Static Convergence

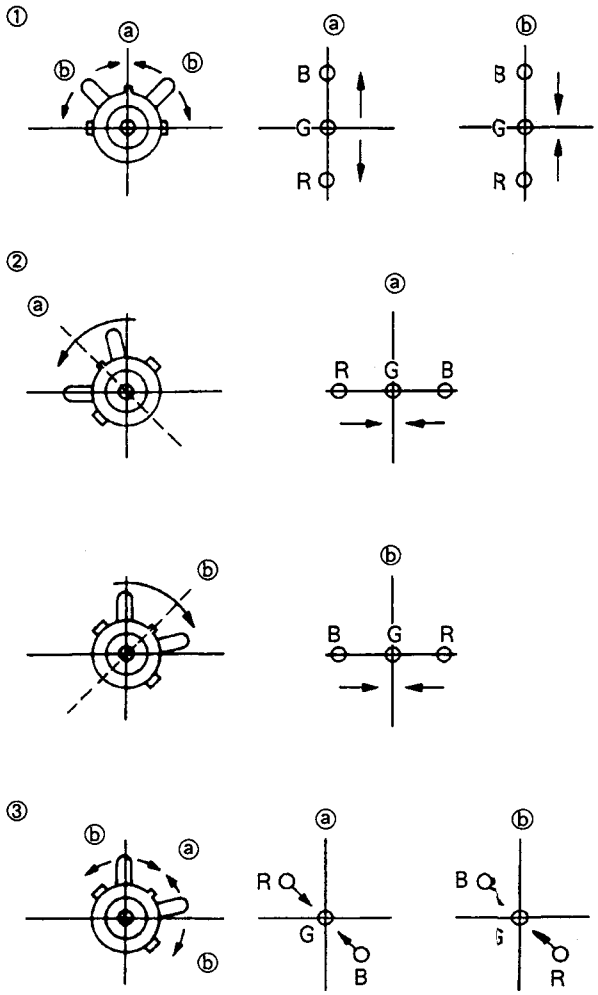


1. Adjust H. STAT VR to coincide red, green and blue dots on the center of screen.(Horizontal movement)
2. Adjust V. STAT magnet to coincide red, green and blue dots on the center of screen.(Vertical movement)
3. If the red, green and blue dots do not coincide on the center of screen with H. STAT VR, perform horizontal convergence adjustment using H. STAT VR and V. STAT magnet as shown below. (In this case, H. STAT VR and V. STAT magnet effect each other.)

- Tilt the V. STAT magnet and adjust static convergence to open or close the V. STAT magnet.



4. When the V. STAT magnet is moved in the direction of arrow ⓐ and ⓑ, red, green and blue dots move as shown below.

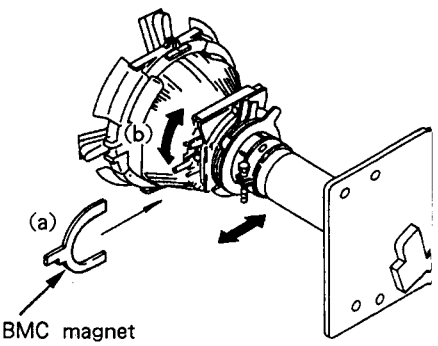


If the red and blue dots do not coincide with green dot, perform following steps.

Move BMC magnet (a) to correct nsufficient H. static convergence.

Rotate BMC magnet (b) to correct nsufficient V. static convergence.

In either case, repeat Beam Landing Adjustmeat.

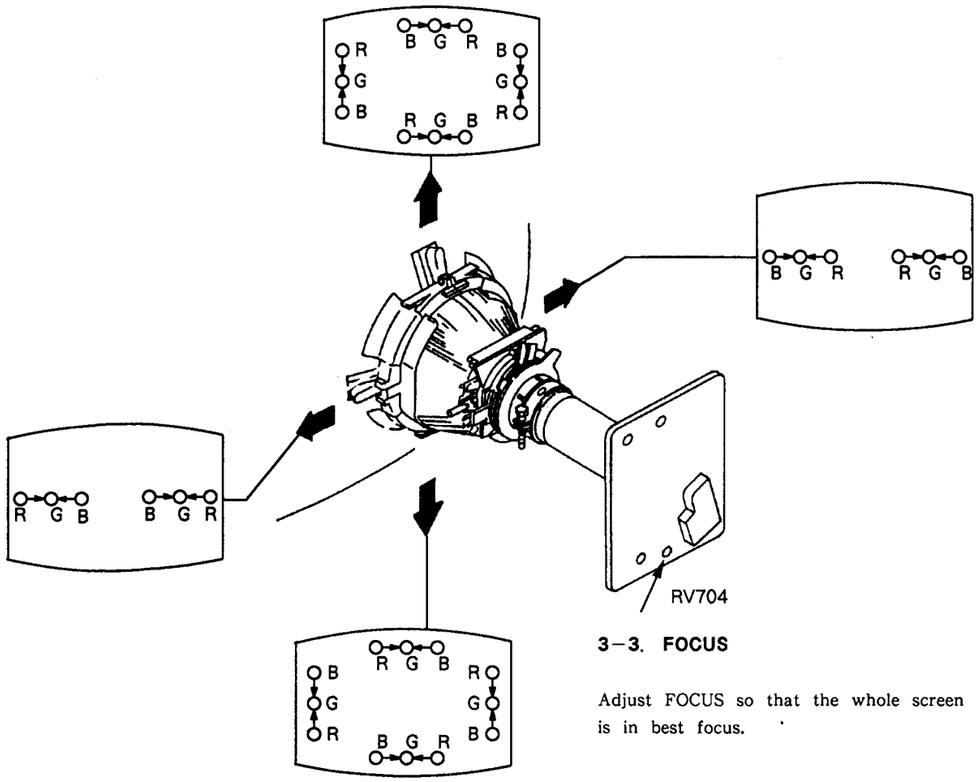


(3) Dynamic Convergence Adjustment

Preparation :

- Before starting, perform Horizontal and Vertical Static Convergence Adjustment..

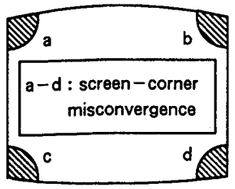
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

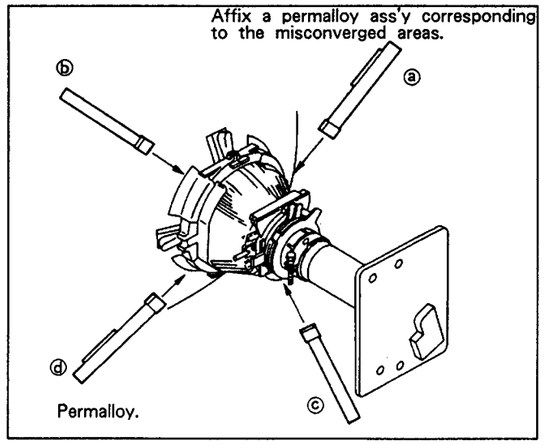


3-3. FOCUS

Adjust FOCUS so that the whole screen is in best focus.

(4) Screen-corner Convergence





3-4. WHITE BALANCE

〔Screen (G2) Setting〕

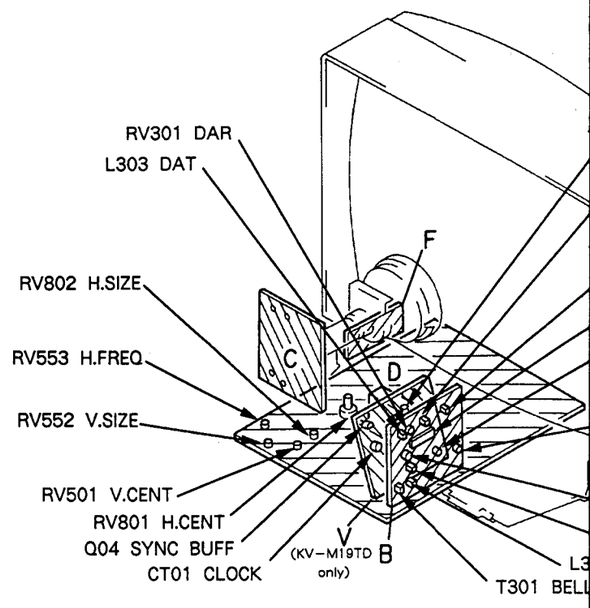
1. Input dot signals from the pattern generator.
2. Set the picture BRIGHTNESS control to the minimum level.
3. Apply 140 V DC to the cathodes of R, G, and B from an external power source.
4. While watching the picture, adjust the G2 volume (RV703) immediately before the fly-back line disappears.

〔White Balance Adjustment〕

1. Input all-white signals from the pattern generator.
2. Adjust the BRIGHTNESS and COLOR controls to the standard level.
3. Adjust the white balance using RV701 (B DRIVE) and RV702 (G DRIVE).

In the following adjustments, the CONTRAST COLOR and BRIGHTNESS controls are set to normal unless otherwise specified.

SECTION 4
CIRCUIT ADJUSTM



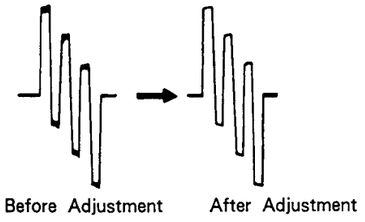
4-1. B BOARD ADJUSTMENTS

REF OSC Adjustment (CT301)

1. Input a PAL COLOR BAR pattern.
2. Short circuit between pin ⑰ of IC301 and ground.
3. Adjust CT301 to obtain color synchronization.
4. Remove the jumper wire from IC301.

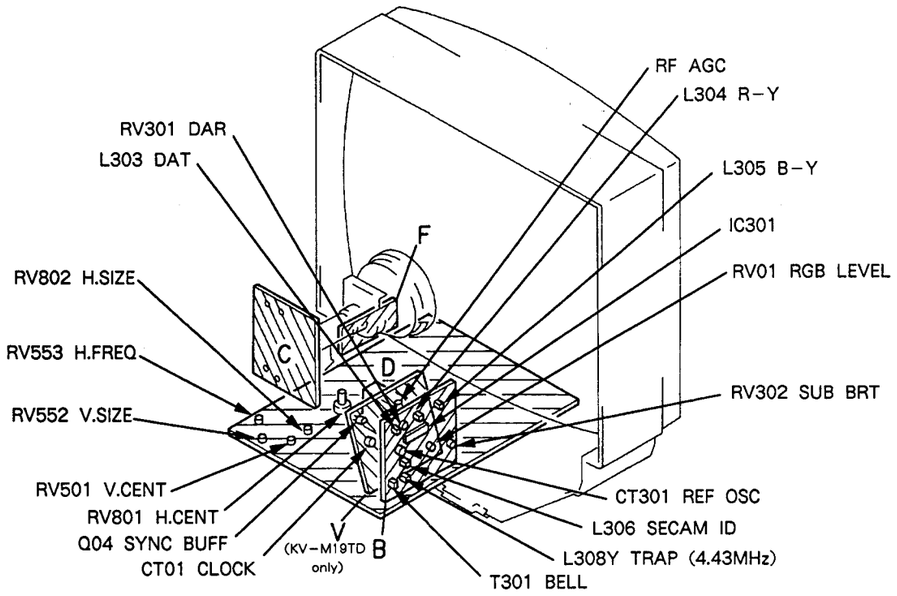
1H DELAY LINE Adjustment (L303 DAT, RV301 DAR)

1. Input a PAL COLOR BAR pattern.
2. Connect the oscilloscope to pin ③ (B-Y) of IC301 and observe the waveform of the H block on the oscilloscope.
3. Adjust L303 to minimize the double waveform outline.



4. Input a PAL TEST COLOR BAR pattern.
5. Rotate the RV301 VR and adjust till the ANT PAL part of the waveform matches the 0 level.

SECTION 4
CIRCUIT ADJUSTMENTS



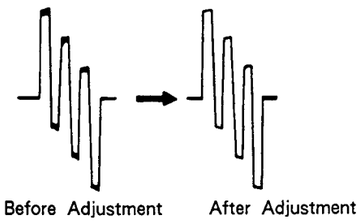
1. B BOARD ADJUSTMENTS

F OSC Adjustment (CT301)

Input a PAL COLOR BAR pattern.
Short circuit between pin ⑰ of IC301 and ground.
Adjust CT301 to obtain color synchronization.
Remove the jumper wire from IC301.

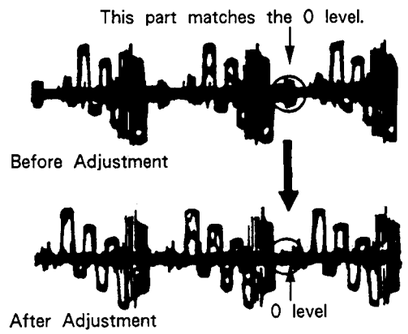
DELAY LINE Adjustment (L303 DAT, RV301 DAR)

Input a PAL COLOR BAR pattern.
Connect the oscilloscope to pin ③ (B-Y) of IC301 and observe the waveform of the H block on the oscilloscope.
Adjust L303 to minimize the double waveform outline.



Before Adjustment After Adjustment

Input a PAL TEST COLOR BAR pattern.
Rotate the RV301 VR and adjust till the ANT PAL part of the waveform matches the 0 level.



6. L303 and RV301 affect each other. so repeat till the conditions of both are met.

Y TRAP 4.25 MHz ADJUSTMENT (L308)

1. Input a SECAM COLOR BAR pattern.
2. Connect pin ⑮ of IC302 to the oscilloscope and adjust L308 so that the waveform level becomes minimum.

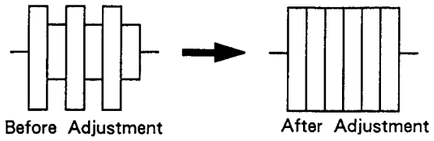
Before Adjustment After Adjustment

SECAM ID Adjustment (L306)

1. Input a SECAM COLOR BAR pattern.
2. Connect a Digital Multimeter at pin ㉑ of IC301.
3. Adjust L306 so that the indicator goes up to the maximum.

BELL FILTER Adjustment (T301)

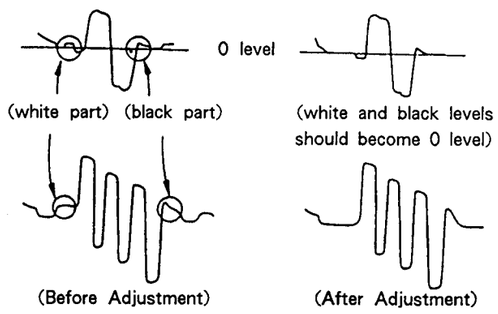
1. Input a SECAM COLOR BAR pattern.
2. Connect an oscilloscope to the Q302 emitter.
3. Adjust T301 so that the waveform becomes flat.



Before Adjustment After Adjustment

SECAM DISCRI Adjustment (L304 R-Y L305 B-Y)

1. Input a SECAM COLOR BAR pattern.
2. Connect an oscilloscope to pin ① of IC301.
3. Adjust L304 (R-Y) so that white and black parts of the waveform of pin ① becomes 0 level.
4. Connect an oscilloscope to pin ③ of IC301.
5. Adjust L305 (B-Y) so that white and black parts of the waveform of pin ③ becomes 0 level.



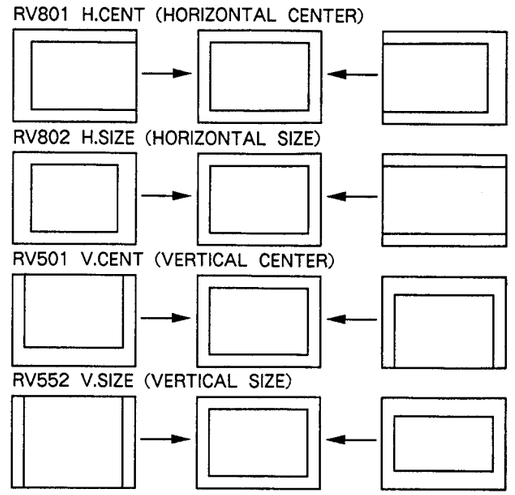
SUB BRT Adjustment (RV302)

1. Input a PAL COLOR BAR signal.
2. Set CONTRAST and COLOR volume to a minimum, and set the BRIGHTNESS volume control to the mechanical center.
3. Slowly rotate SUB BRT (RV302) until the red portion is faintly illuminated.

4-2. D BOARD ADJUSTMENTS

TU AGC (RF AGC)

1. Tune in air signals.
2. Adjust AGC VR (RF AGC) so that snow-noise and cross-modulation just disappear from the picture.



H. FREQ (RV553)

1. Input a PAL COLOR BAR signal, then connect an electrolytic capacitor (100 μ/16V) between Pin ⑤ and GND of IC551.
2. Adjust RV553 (H. FREQ) to stop scrolling of the picture in the horizontal direction.
3. After adjustment, remove the electrolytic capacitor.

fo : too low fo : suitable fo : too high
fo : 15.625±50Hz

4-3. V BOARD ADJUSTMENTS (KV - M19TD only)

Clock Adjustment (CT01)

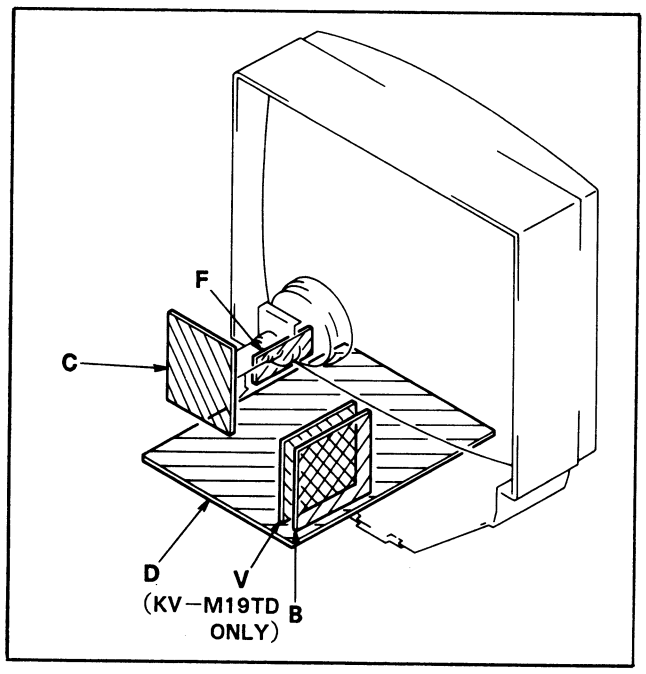
1. Raise pins ② and ③ of CNV41..
2. Set up the TELE TEXT mode.
3. Adjust CT01 to stop the pictures from scrolling.

RGB Level Adjustment (RV01)

1. Set PICTURE to maximum.
2. Adjust RV01 till the RGB output becomes maximum.

SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch : 5mm
  Rating electrical power : 1/4W

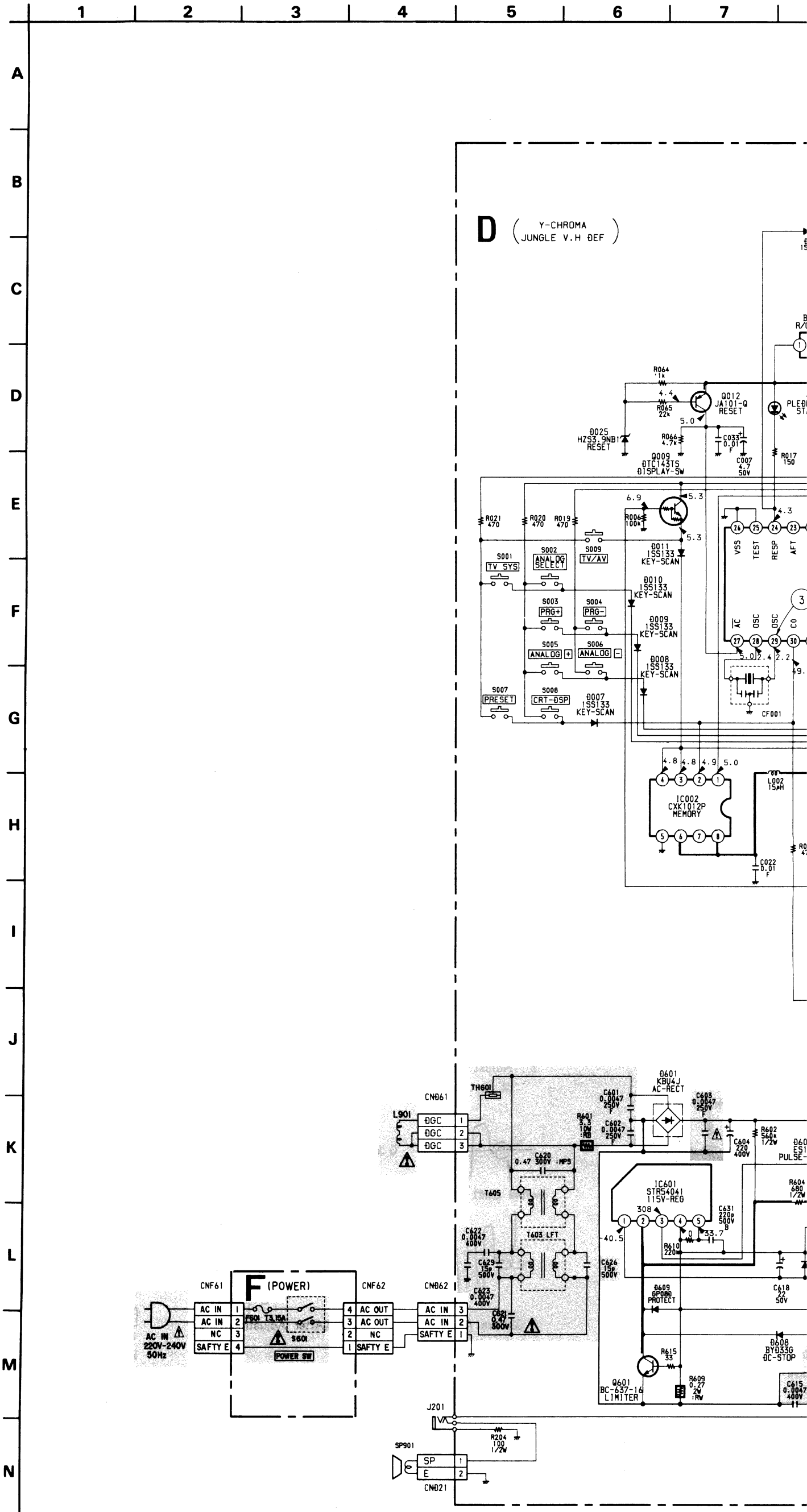
- All resistors are in ohms.
- PWW : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in V.
- Readings are taken with a 10MΩ digital multimeter.
- Readings are taken with a PAL color-bar signal input.
  no mark : PAL
  ( ) : SECAM
- Voltage variations may be noted due to normal production tolerances.
- ▬▬ : B+line
- ➡ : signal path.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE WIREWOUND
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ABL	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

5-2. SCHEMATIC DIAGRAM (1)



BAND / TU101	VHF LOW	VHF HIGH	UHF
AGC	2.8V	5.8V	7.5V
U	0V	0V	11.6V
VC	4.2V	2.2V	5.9V
IF	180mV	195mV	195mV

Y-CHROMA JUNGLE V.H DEF

TU101 UV617

IC001 M50436-616SP TUNING-CTL

IC002 CXK1012P MEMORY

IC003 BX-1398 R/C-SENSOR

IC004 HZT33-02 30V-REG

IC005 TA78L005AP 5V-REG

IC501 TDA4555-N7 JUNGLE

IC601 STR54041 115V-REG

JC201 TDA1013A AF-OUT

CF001

Q001 DTC124ES VIDEO-MUTE

Q002 1SS133 R/C-MODE

Q003 DTA124ES STAND-BY

Q003 1SS133 VOL-CTL-1

Q004 JC501-Q VC-OUT

Q005 JC501-Q ON-SCREEN

Q008 DTC124ES TV/AV

Q009 DTC143TS D15PLAY-5W

Q012 JA101-Q RESET

Q015 JC501-Q ABL

Q071 JA101-Q SYNC-SEP

Q151 DTA114ES BAND-VL

Q152 DTA114ES BAND-VH

Q154 DTA114ES BAND-U

Q155 JC501-Q VC-FILTER

Q551 JA101-Q VIDEO-AMP

Q601 BC-637-16 LIMITER

Q804 JC501-Q ST/BY-SW

D001 1SS133

D002 1SS133 R/C-MODE

D003 1SS133 VOL-CTL-1

D005 PLEDH544CL-6 STAND-BY

D007 1SS133 KEY-SCAN

D008 1SS133 KEY-SCAN

D009 1SS133 KEY-SCAN

D010 1SS133 KEY-SCAN

D011 1SS133 KEY-SCAN

D016 1SS133 PROTECT

D017 1SS133 COL-CTL

D019 1SS133 PROTECT

D025 HZS3.9NB1 RESET

D151 1SS133 BAND-SW

D156 1SS133 VC-BIAS

D551 GP08Q CURRENT-

D601 KBU4J AC-RECT

D602 ESIF PULSE-CLIP

D603 GP08Q DC-STOP

D604 RGP15J 119V-RECT

D605 BY033G 15V-RECT

D606 ERA81-004 7V-RECT

D607 BY033G REF.RECT

D608 BY033G DC-STOP

D609 GP08Q PROTECT

D610 GP08Q PROTECT

D611 R2M PROTECT

D801 1SS148 AF-MUTE

D804 1SS133

D501 GP08Q BOOST

S002 ANALOG SELECT

S003 PRG+

S004 PRG-

S005 ANALOG +

S006 ANALOG -

S007 CRT-DSP

S009 TV/AV

T601 SRT

T603 LFT

T604

L001 33uH

L002 15uH

L003 10uH

L004 33uH

L005 10uH

L151 82uH :LF-8F

L152 560uH

L153 1.5uH

L201 10uH

L501 4.7k

L502 820p B

L503 47p

L504 470

L505 100 50V

L506 0.68 63V :MPS

L507 33k

L508 0.68 1W :RS

L510 22 50V

L512 1k 1W :RS

L551 120 1/4W

L552 5.6k

L553 1.5k

L554 22 50V

L555 2.2 50V

L556 1.2k

L557 0.33 100V :MPS

L558 1k

L559 27k

L560 240k

L562 2200p 3k

L563 47 16V

L564 0.0033 100V 2k :PP

L565 24k :RN

L566 5p

L567 100k

L569 15k

L570 0.47 50V

L571 39k

L572 100

L573 22k

L574 68k

L575 2.2k

L576 18k

L801 50V

L803 0.047 100V :MPS

L804 0.003 400V :MPS

L805 0.6A

L806 2.2k

L807 50V

L808 0.6A

L809 0.6A

L810 0.6A

L811 0.6A

L812 0.6A

L813 0.6A

L814 0.6A

L815 0.6A

L816 0.6A

L817 0.6A

L818 0.6A

L819 0.6A

L820 0.6A

L821 0.6A

L822 0.6A

L823 0.6A

L824 0.6A

L825 0.6A

L826 0.6A

L827 0.6A

L828 0.6A

L829 0.6A

L830 0.6A

L831 0.6A

L832 0.6A

L833 0.6A

L834 0.6A

L835 0.6A

L836 0.6A

L837 0.6A

L838 0.6A

L839 0.6A

L840 0.6A

L841 0.6A

L842 0.6A

L843 0.6A

L844 0.6A

L845 0.6A

L846 0.6A

L847 0.6A

L848 0.6A

L849 0.6A

L850 0.6A

L851 0.6A

L852 0.6A

L853 0.6A

L854 0.6A

L855 0.6A

L856 0.6A

L857 0.6A

L858 0.6A

L859 0.6A

L860 0.6A

L861 0.6A

L862 0.6A

L863 0.6A

L864 0.6A

L865 0.6A

L866 0.6A

L867 0.6A

L868 0.6A

L869 0.6A

L870 0.6A

L871 0.6A

L872 0.6A

L873 0.6A

L874 0.6A

L875 0.6A

L876 0.6A

L877 0.6A

L878 0.6A

L879 0.6A

L880 0.6A

L881 0.6A

L882 0.6A

L883 0.6A

L884 0.6A

L885 0.6A

L886 0.6A

L887 0.6A

L888 0.6A

L889 0.6A

L890 0.6A

L891 0.6A

L892 0.6A

L893 0.6A

L894 0.6A

L895 0.6A

L896 0.6A

L897 0.6A

L898 0.6A

L899 0.6A

L900 0.6A

L901 0.6A

L902 0.6A

L903 0.6A

L904 0.6A

L905 0.6A

L906 0.6A

L907 0.6A

L908 0.6A

L909 0.6A

L910 0.6A

L911 0.6A

L912 0.6A

L913 0.6A

L914 0.6A

L915 0.6A

L916 0.6A

L917 0.6A

L918 0.6A

L919 0.6A

L920 0.6A

L921 0.6A

L922 0.6A

L923 0.6A

L924 0.6A

L925 0.6A

L926 0.6A

L927 0.6A

L928 0.6A

L929 0.6A

L930 0.6A

L931 0.6A

L932 0.6A

L933 0.6A

L934 0.6A

L935 0.6A

L936 0.6A

L937 0.6A

L938 0.6A

L939 0.6A

L940 0.6A

L941 0.6A

L942 0.6A

L943 0.6A

L944 0.6A

L945 0.6A

L946 0.6A

L947 0.6A

L948 0.6A

L949 0.6A

L950 0.6A

L951 0.6A

L952 0.6A

L953 0.6A

L954 0.6A

L955 0.6A

L956 0.6A

L957 0.6A

L958 0.6A

L959 0.6A

L960 0.6A

L961 0.6A

L962 0.6A

L963 0.6A

L964 0.6A

L965 0.6A

L966 0.6A

L967 0.6A

L968 0.6A

L969 0.6A

L970 0.6A

L971 0.6A

L972 0.6A

L973 0.6A

L974 0.6A

L975 0.6A

L976 0.6A

L977 0.6A

L978 0.6A

L979 0.6A

L980 0.6A

L981 0.6A

L982 0.6A

L983 0.6A

L984 0.6A

L985 0.6A

L986 0.6A

L987 0.6A

L988 0.6A

L989 0.6A

L990 0.6A

L991 0.6A

L992 0.6A

L993 0.6A

L994 0.6A

L995 0.6A

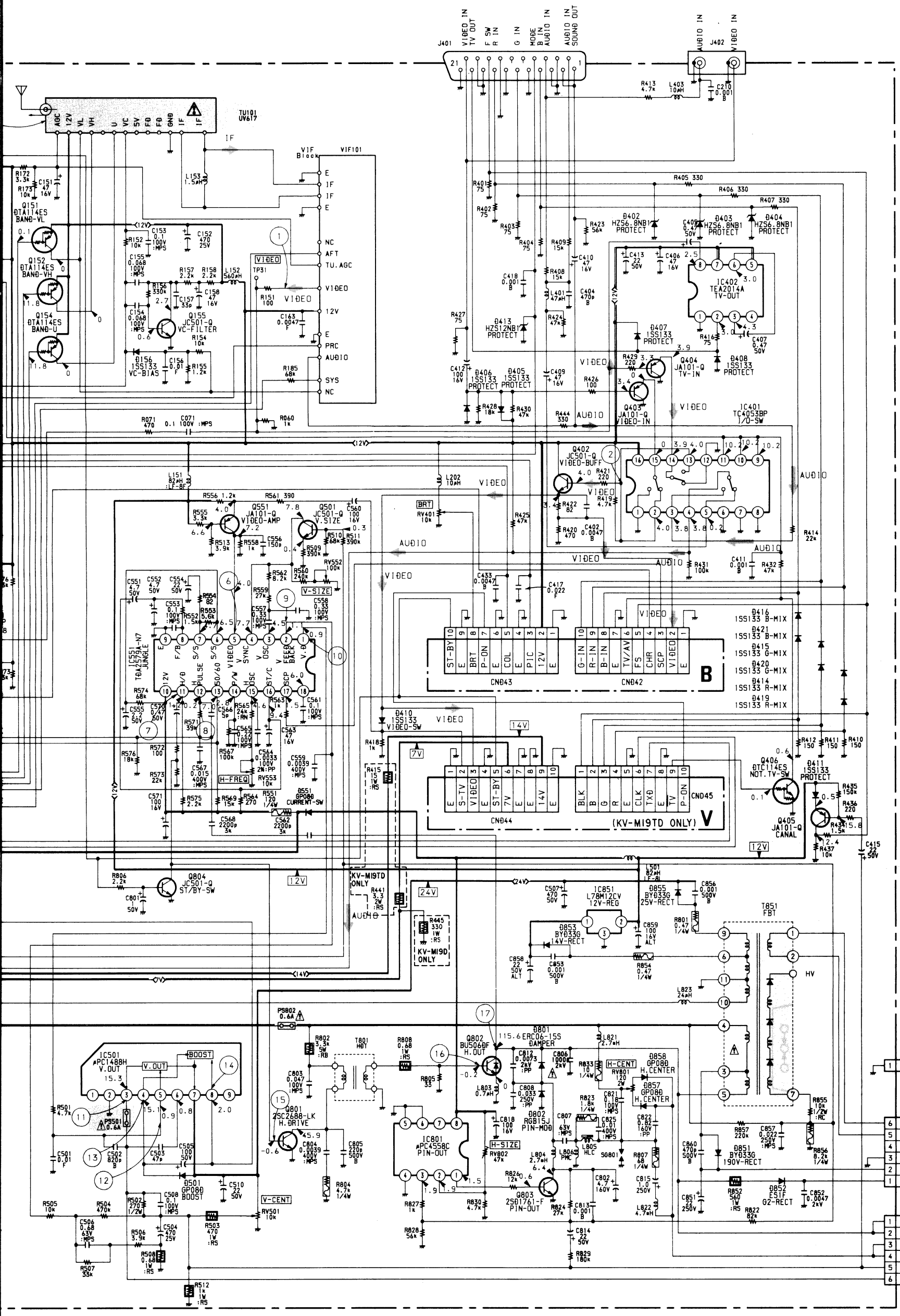
L996 0.6A

L997 0.6A

L998 0.6A

L999 0.6A

L1000 0.6A


J401
VIDEO IN
TV OUT
F SW
R IN
G IN
MODE
B IN
AUDIO IN
AUDIO IN
SOUND OUT
J402
AUDIO IN
VIDEO IN
TU101
UV617
AGC
12V
VL
VH
U
VC
5V
FB
FB
GND
IF
IF
VIF Block
VIF101
E
IF
IF
E
NC
AFT
TU. AGC
VIDEO
12V
E
PRC
AUDIO
SYS
NC
TP31
VIDEO
Q151 DTA114ES BAND-VL
Q152 DTA114ES BAND-VH
Q154 DTA114ES BAND-U
Q155 JC501-Q VC-FILTER
D156 1SS133 VC-BIAS
Q551 JA101-Q VIDEO-AMP
Q501 JC501-Q V.SIZE
V-SIZE
IC551 TBA125AQ-N7 JUNGLE
H-FREQ
RV553 10k
D551 GP080 CURRENT-SW
V-CENT
RV501 10k
BRT
RV401 10k
L151 82μH :LF-BF
L202 10μH
L153 1.5μH
L152 560μH
L501 82μH :LF-BF
L821 2.7μH
L823 24μH
L822 4.7μH
L803 0.7μH
L804 2.7μH
L805 HLC
L401 47μH
L823 24μH
D401 HZS6.8NB1 PROTECT
D402 HZS6.8NB1 PROTECT
D403 HZS6.8NB1 PROTECT
D404 HZS6.8NB1 PROTECT
D413 HZS12NB1 PROTECT
D407 1SS133 PROTECT
D408 1SS133 PROTECT
D406 1SS133 PROTECT
D405 1SS133 PROTECT
D410 1SS133 VIDEO-SW
D411 1SS133 PROTECT
D416 1SS133 B-MIX
D421 1SS133 B-MIX
D415 1SS133 G-MIX
D420 1SS133 G-MIX
D414 1SS133 R-MIX
D419 1SS133 R-MIX
IC402 TEA2014A TV-OUT
Q404 JA101-Q TV-IN
Q403 JA101-Q VIDEO-IN
IC401 TC4053BP I/O-SW
Q402 JC501-Q VIDEO-BUFF
Q406 DTC114ES NOT.TV-SW
Q405 JA101-Q CANAL
CN043
CN042
CN044
CN045
B
V
(KV-MI9TD ONLY)
Q804 JC501-Q ST/BY-SW
KV-MI9TD ONLY
KV-MI9D ONLY
IC851 L78M12CV 12V-REG
D855 BY033G 25V-RECT
D853 BY033G 14V-RECT
T851 FBT
HV
TO COATING E
TO C BOARD (CNC74)
TO C BOARD(CNC72)
CN082
CN081
H1
H2
NC
E
190V
G2
H.DY
H.DY
H.DY
H.DY
V.DY
V.DY
D851 BY033G 190V-RECT
D852 ESIF G2-RECT
Q801 2SC2688-LK H.DRIVE
Q802 BU506DF H.OUT
D801 115.6ERC06-15S DAMPER
D802 RGB15J PIN-MOD
Q803 2SD1761-F PIN-OUT
IC801 μPC4558C PIN-OUT
IC501 μPC1488H V.OUT
D501 GP080 BOOST
D858 GP080 H.CENTER
D857 GP080 H.CENTER
H-CENT
H-SIZE
V-CENT
BOOST
PS501 0.6A
PS802 0.6A
DY
L902

[Y-CHROMA JUNGLE V.H DEF] D D

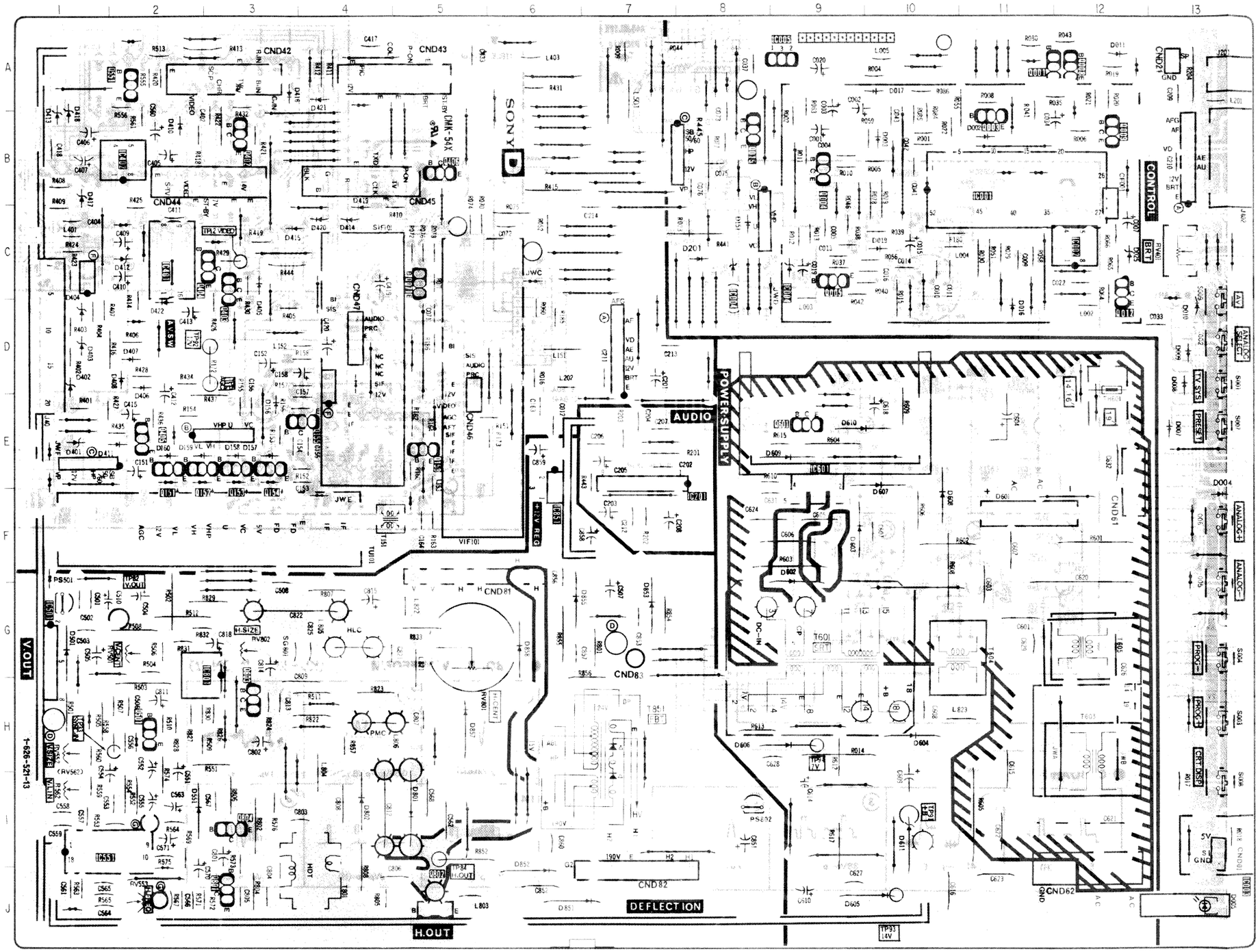
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

● D BOARD WAVEFORM

① 1Vp-p (H)	⑦ 4Vp-p (H)	⑬ 1.6Vp-p (V)
② 0.95Vp-p (H)	⑧ 6Vp-p (H)	⑭ 1.7Vp-p (V)
③ 3.7Vp-p (4MHz)	⑨ 0.9Vp-p (V)	⑮ 3.4Vp-p (H)
④ 4.8Vp-p (V)	⑩ 5Vp-p (V)	⑯ 7.4Vp-p (H)
⑤ 6.8Vp-p (H)	⑪ 52Vp-p (V)	⑰ 1100Vp-p (H)
⑥ 1.8Vp-p (H)	⑫ 30Vp-p (V)	

5-3. PRINTED WIRING BOARDS (1)

D BOARD



IC
IC001
IC002
IC003
IC005
IC201
IC401
IC402
IC501
IC551
IC601
IC801
IC851

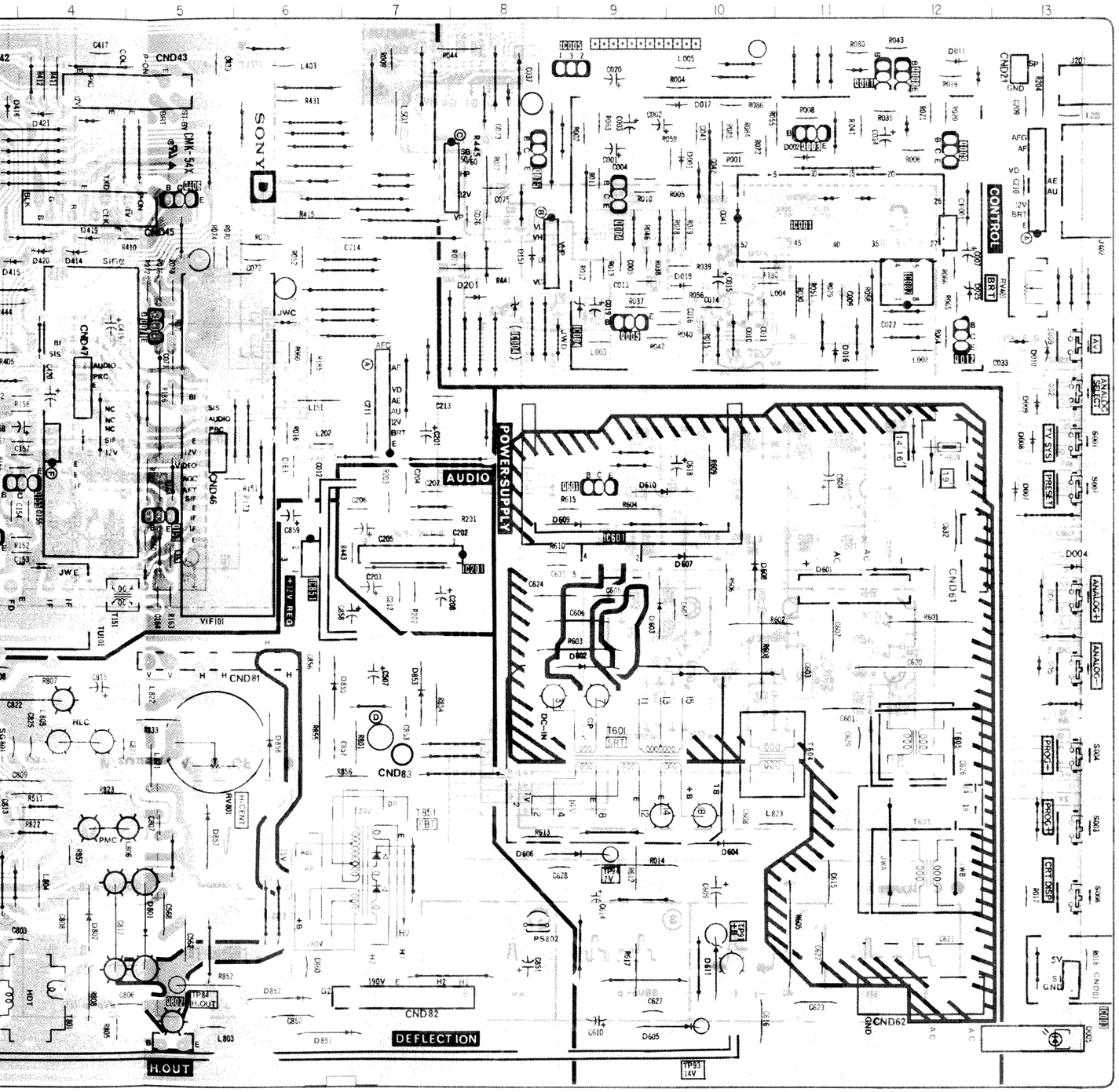
TRANS
Q001
Q003
Q004
Q005
Q008
Q009
Q012
Q015
Q071
Q151
Q152
Q153
Q154
Q155
Q158
Q402
Q403
Q404
Q405
Q406
Q501
Q551
Q601
Q801
Q802
Q803
Q804

DIOD
D004
D005
D007
D008
D009
D010
D011
D016

DEF D

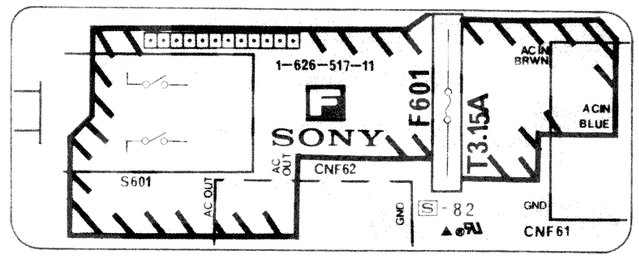
D

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

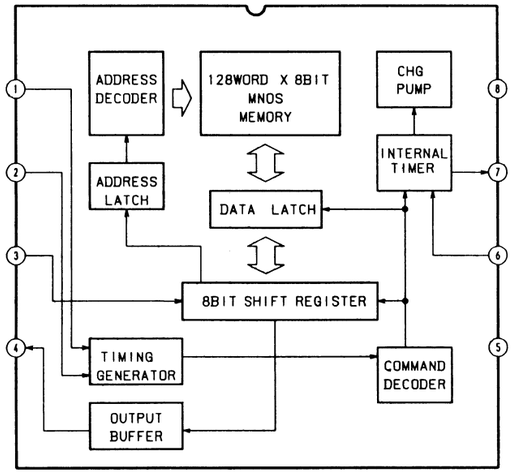


IC		D017	B-9
IC001	B-11	D019	C-10
IC002	C-12	D025	C-12
IC003	I-13	D041	B-10
IC005	A-9	D151	C-8
IC201	E-7		
		D156	E-3
IC401	C-2	D401	E-1
IC402	B-2	D402	D-1
IC501	G-1	D403	D-1
IC551	I-2	D404	D-1
IC601	E-9		
		D405	C-3
IC801	G-2	D406	D-2
IC851	F-6	D407	D-2
		D408	D-2
TRANSISTOR		D409	B-2
Q001	A-11	D410	B-2
Q003	B-11	D411	E-2
Q004	B-9	D412	C-2
Q005	C-9	D413	B-1
Q008	A-12	D501	G-1
Q009	B-12	D551	I-2
Q012	D-12	D601	D-11
Q015	B-8	D602	F-9
Q071	C-5	D603	F-10
Q151	E-2	D604	H-10
Q152	E-2	D605	I-9
Q153	E-3	D606	H-9
Q154	E-3	D607	E-10
Q155	E-4	D608	G-11
Q158	E-5	D609	E-9
Q402	B-3	D610	E-10
Q403	C-3	D801	I-5
Q404	C-3	D802	I-4
Q405	E-2	D851	J-6
Q406	B-5	D852	J-6
Q501	H-2	D853	G-7
Q551	A-2	D854	F-7
Q601	E-8	D855	G-6
Q801	J-3	D857	H-5
Q802	J-5	D858	G-6
Q803	H-3	VARIABLE RESISTOR	
Q804	I-3	RV501	G-2
DIODE		RV552	H-1
D004	C-9	RV553	J-2
D005	J-13	RV562	I-1
D007	E-13	RV801	G-5
D008	D-13	RV802	G-3
D009	D-13		
D010	D-13		
D011	A-12		
D016	D-11		

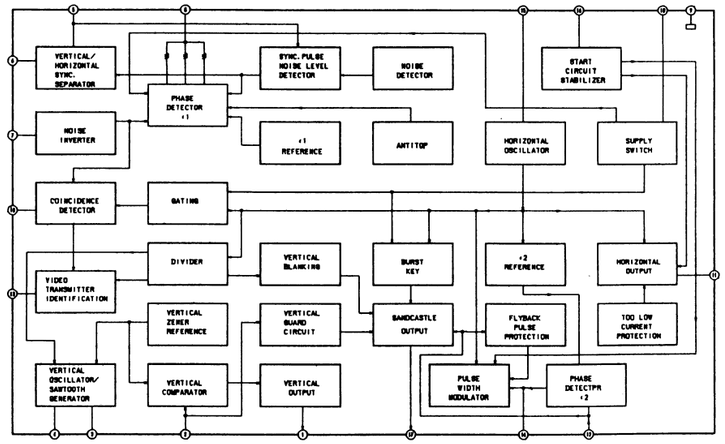
F BOARD



D BOARD IC002 CXK1012P

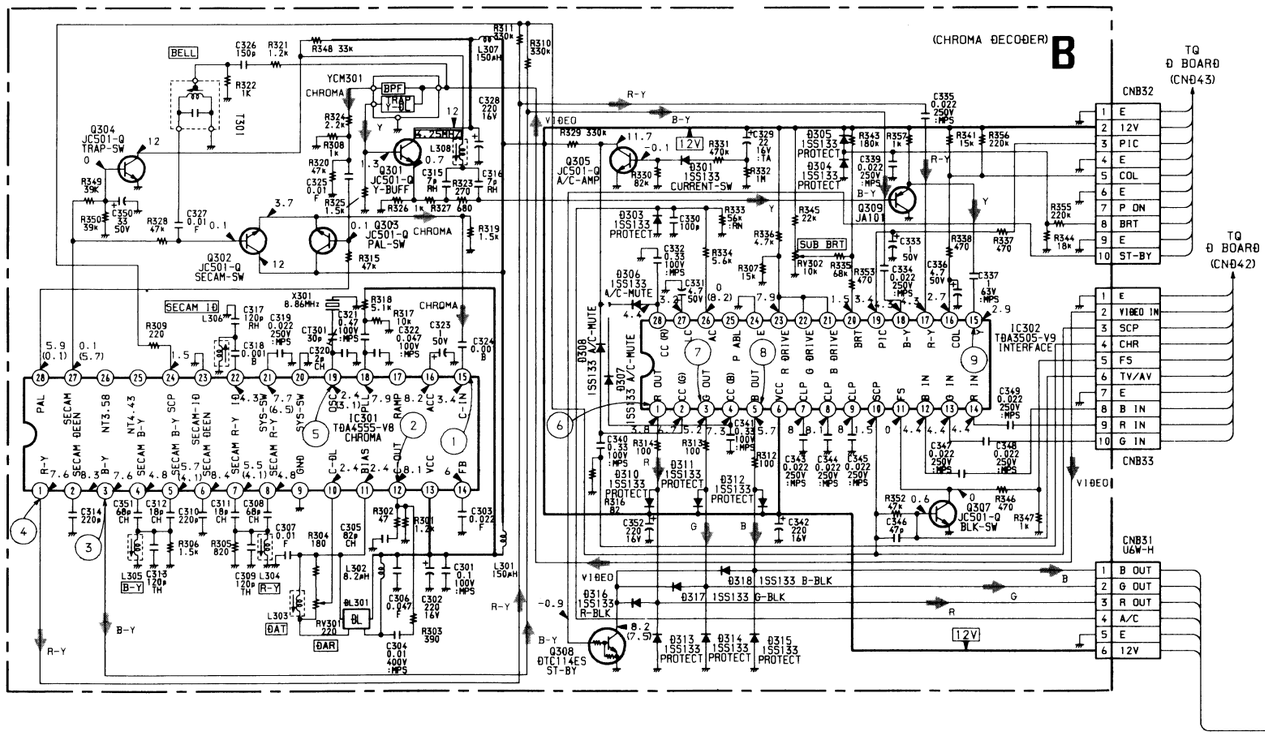


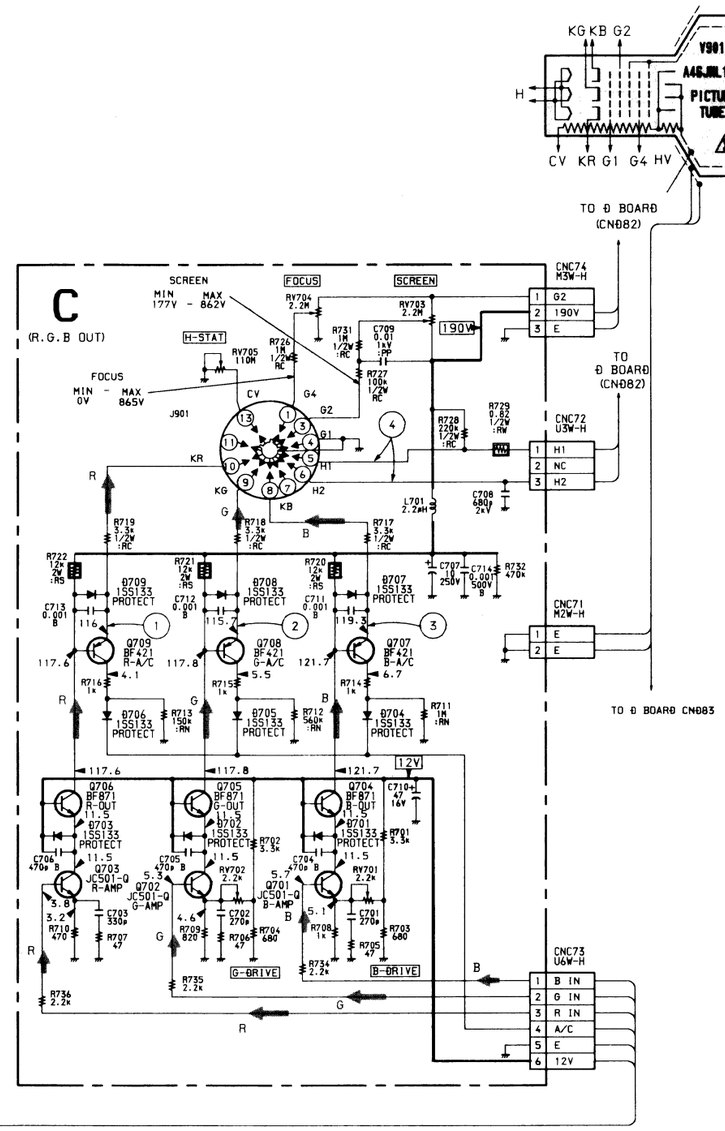
D BOARD IC551 TDA2579A-N7

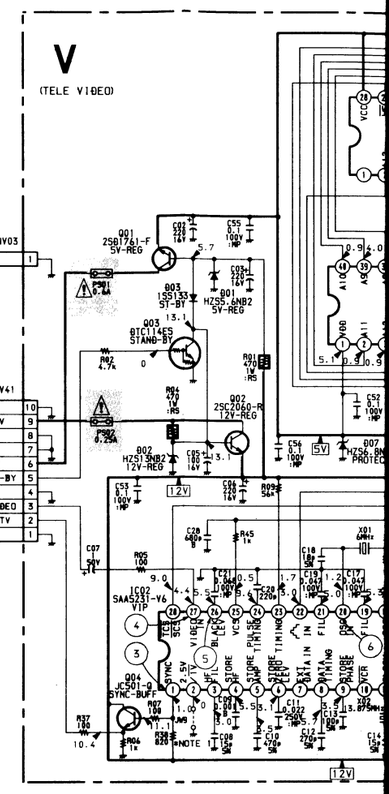


KV-M19D/M19TD
RM-658 RM-657

SCHEMATIC DIAGRAM (2)







● B BOARD WAVEFORM

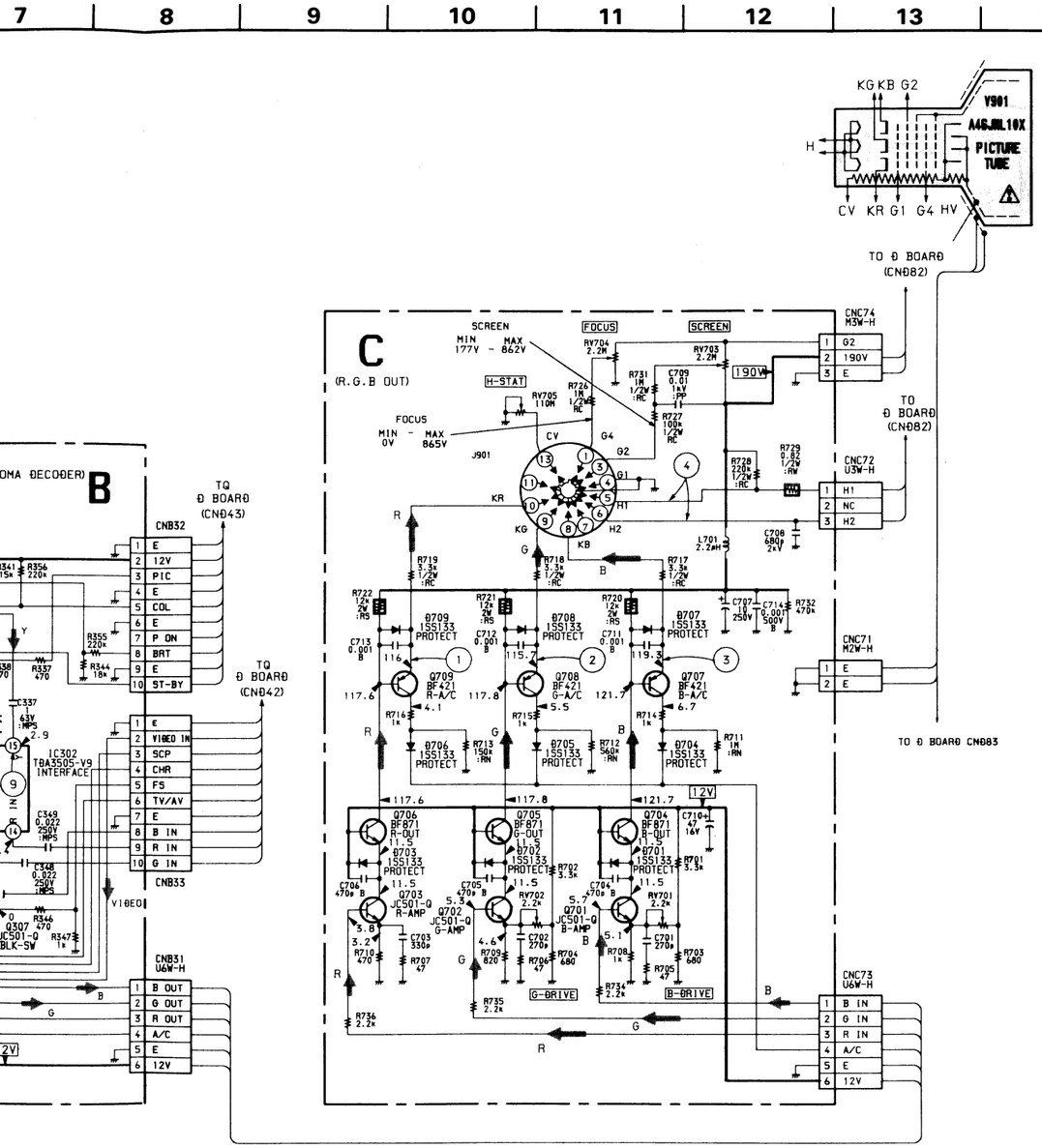
① 0.6Vp-p (H)	② 1.5Vp-p (H)	③ 1.4Vp-p (H)	④ 1Vp-p (H)	⑤ 0.95Vp-p (8.86MHz)
⑥ 2.2Vp-p (H)	⑦ 2.2Vp-p (H)	⑧ 2.2Vp-p (H)	⑨ 0.4Vp-p (H)	

● C BOARD WAVEFORM

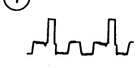
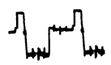
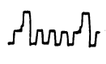
① 52Vp-p (H)	② 42Vp-p (H)	③ 38Vp-p (H)	④ 26Vp-p (H)

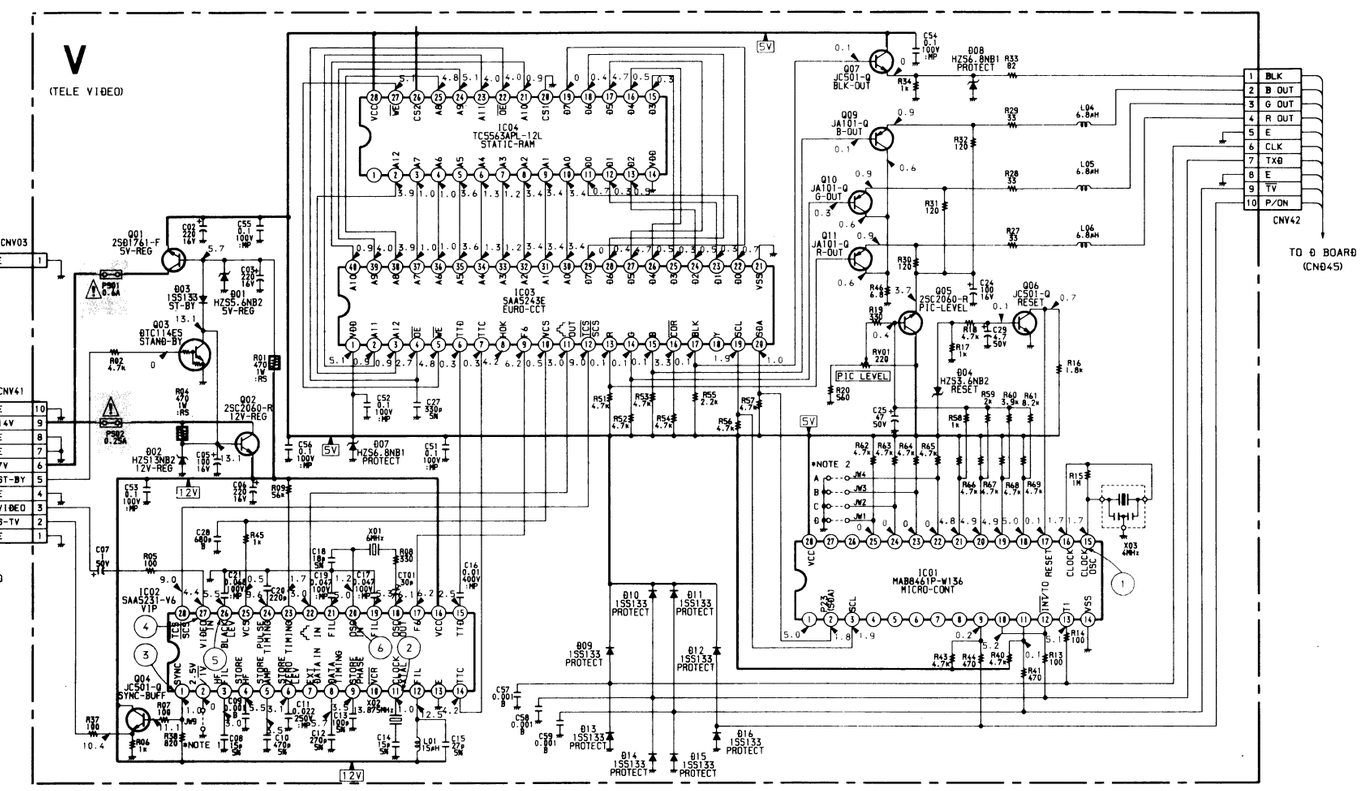
● V BOARD WAVEFORM (KV-M

① 3.5V (4MHz)	② 0.56Vp-p (8.75MHz)	③
④ 1Vp-p (H)	⑤ 2.9Vp-p (H)	⑥



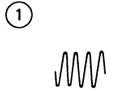
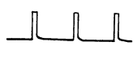
● C BOARD WAVEFORM

①  52Vp-p (H)	②  42Vp-p (H)	③  38Vp-p (H)	④ 26Vp-p (H)



(KV-M19TD ONLY)

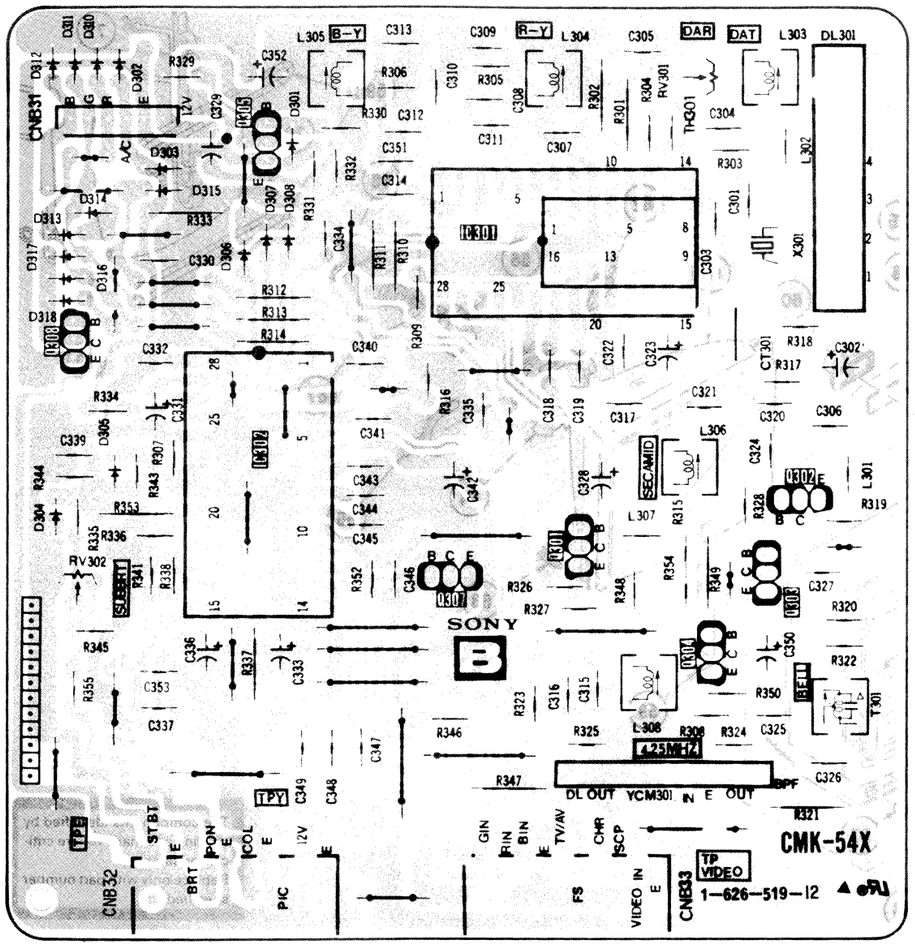
● V BOARD WAVEFORM (KV-M19TD ONLY)

①  3.5V (4MHz)	② 0.56Vp-p (8.75MHz)	③ 1Vp-p (H)
④ 1Vp-p (H)	⑤  2.9Vp-p (H)	⑥ 0.4Vp-p (6MHz)

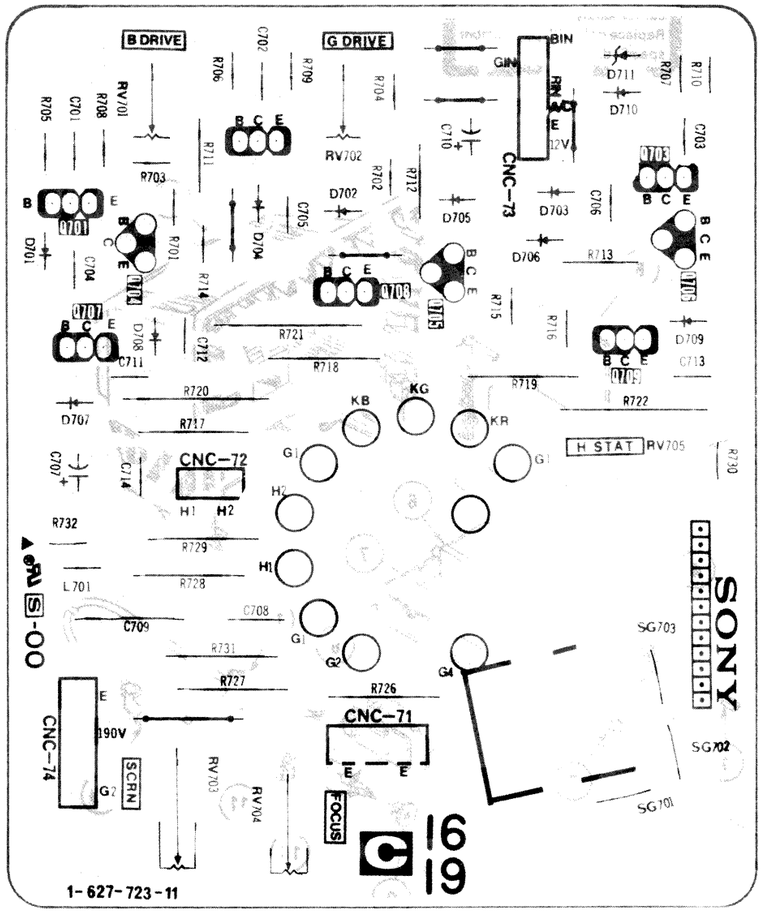
PRINTED WIRING BOARDS (2)

[CHOROMA DECODER] **B** **C** [R.G.B OUT] **V** [TELE VIDEO] (KV-M19TD ONLY)

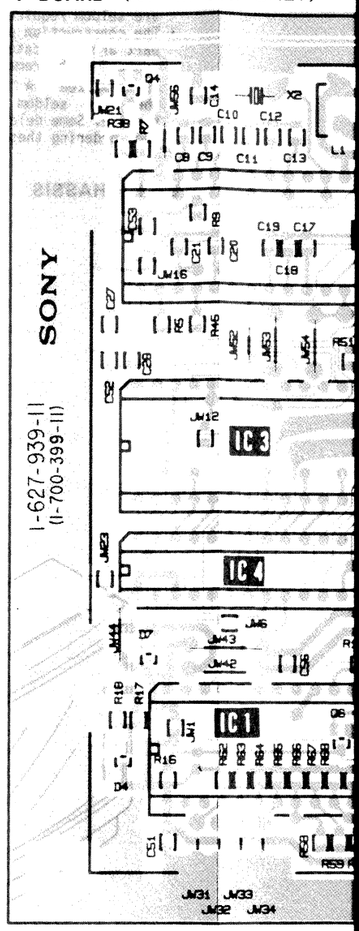
B BOARD



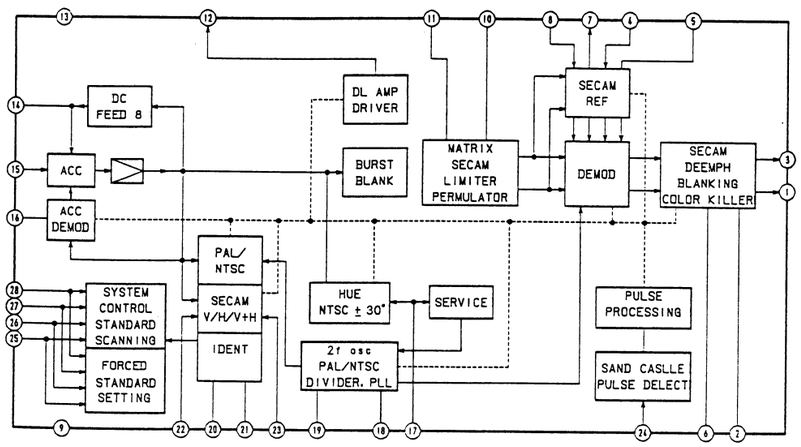
C BOARD



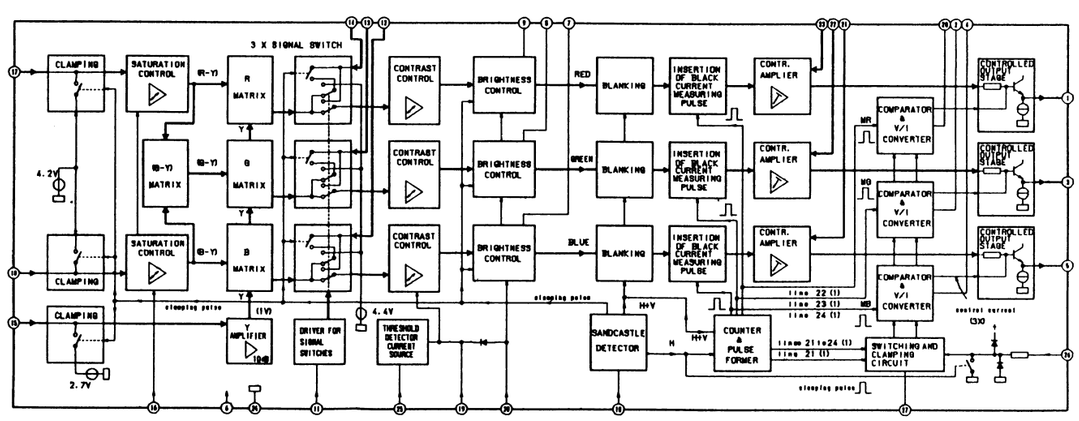
V BOARD (KV-M19TD ONLY)



B BOARD IC301 TDA4555-V8



B BOARD IC302 TDA3505-V9

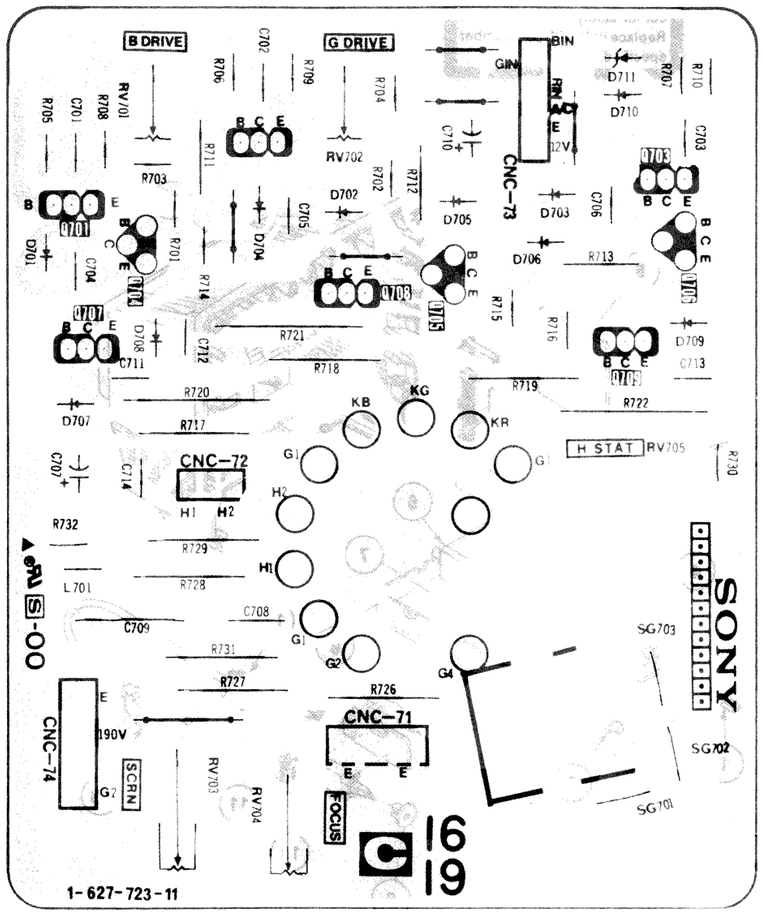


KV-M19D/M19TD RM-658 RM-657

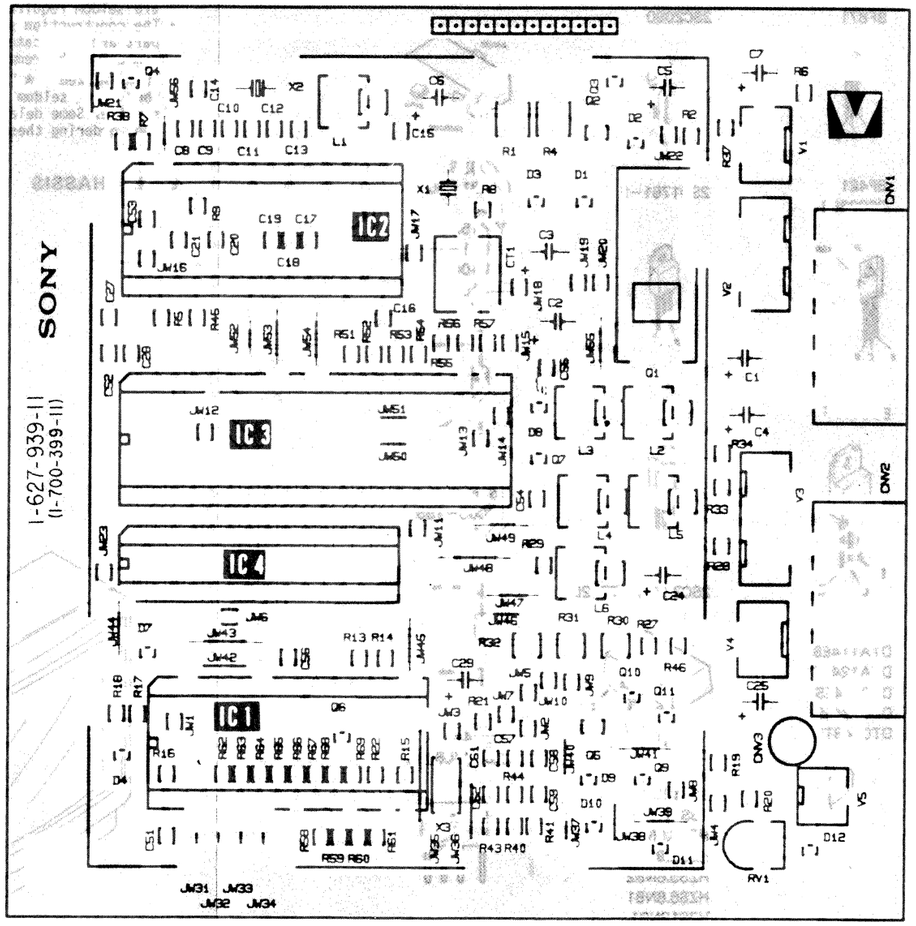
DER] **B** **C** [R.G.B OUT] **V** [TELE VIDEO] (KV-M19TD ONLY)

V

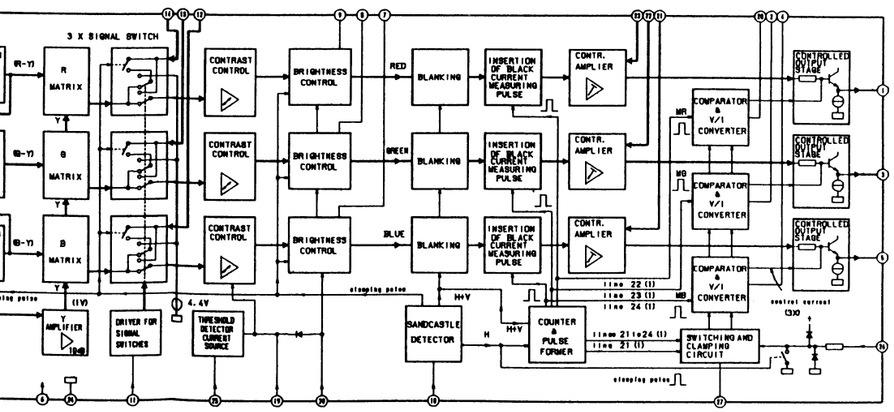
C BOARD



V BOARD (KV-M19TD ONLY)



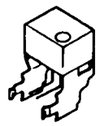
TDA3505-V9



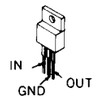
5-4. SEMICONDUCTORS

BA4558
CXK1012P
TBA129
TEA2014A
μ PC4558C

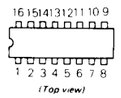
BX-1398



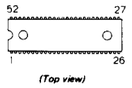
L78M12CV
μ PC78M12H



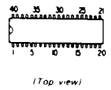
M4053BP
TC4053BP



M50436-616SP

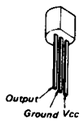


SAA5243E

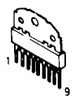


STR54041

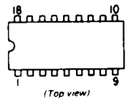
TA78L005AP
μ PC78L05J



TDA1013A

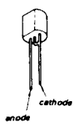


TDA2579-N7



MAB8461P-W136
SAA5231-V6
TDA3505-V9
TDA4555-V8
TMM2063P-70

HZT33-02
μ PC574J

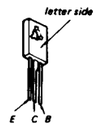


μ PC1488H

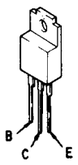
BC637-16

BF199
BF871

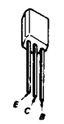
BF421
2SC2688



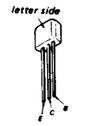
BU506DF



DTA114ES
DTA124ES
DTC114ES
DTC124ES
DTC143TS

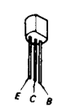


JA101-Q
JC501-Q

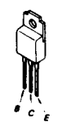


2SB815B6-TB
2SC2712G-TE85L

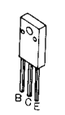
2SA1091
2SC2060



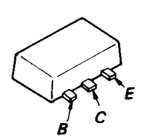
2SD1761-F



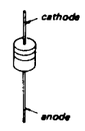
2SD2096



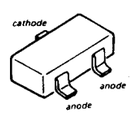
2SC2873Y-TE12L



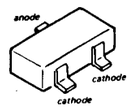
1SS133
1SS148
HZS3.6NB2
HZS3.9NB1
HZS5.6NB2
HZS6.8NB1
HZS12NB1
HZS13NB2
SIR-56ST5F



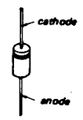
DAN202K-T-97
1S2837



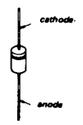
DAP202K-T-97



BYD33G
ERA81-004
GP08D
RGB15J
RGP01-17
RGP10G
RGP15J

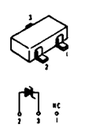


ES1F
ERC06-15S
R2M

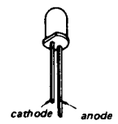


KBU4J
KBU4JL6088

MA3036H-TX
MA3056M-TX
MA3068M-TX
MA3130L-TX



CQX51L-5

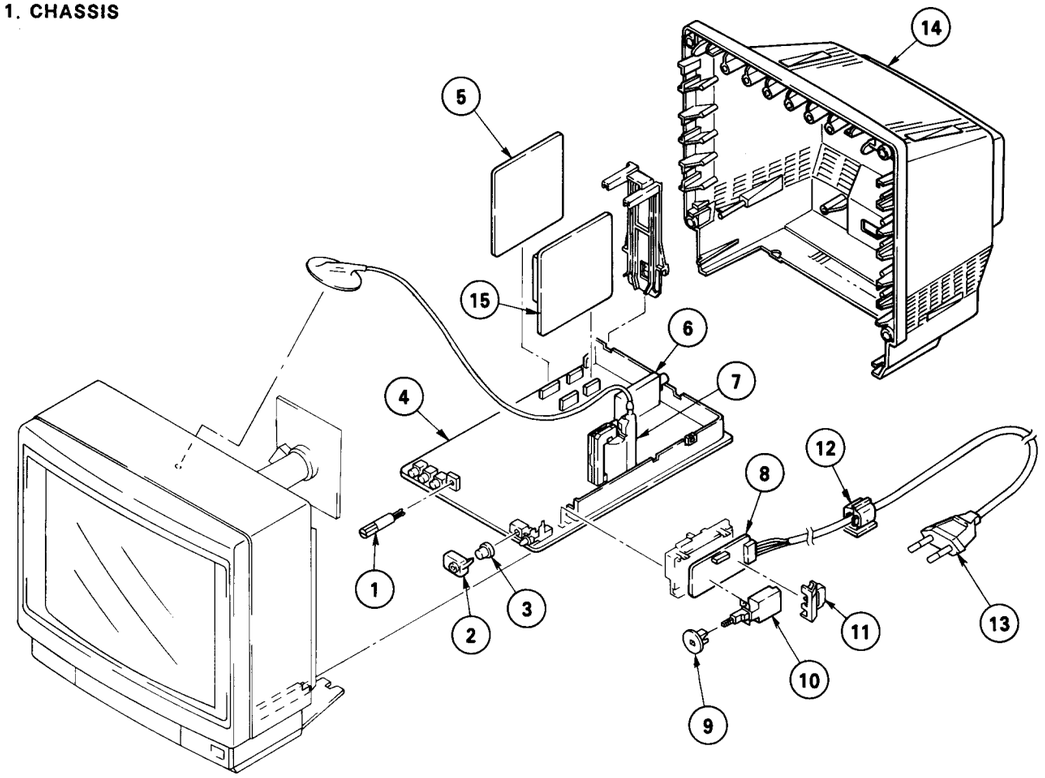


SECTION 6
EXPLODED VIEWS

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

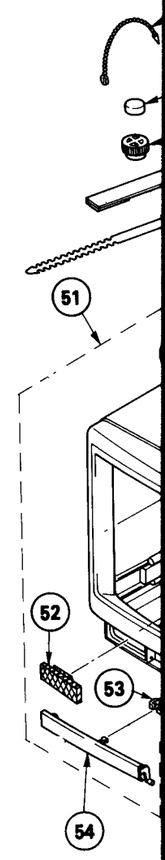
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CHASSIS



No.	Part No.	Description	Remark
1	4-389-302-01	KNOB, VOLUME	
2	*4-388-955-01	BRACKET (B), LIGHT GUIDE	
3	*4-374-987-01	GUIDE, LIGHT	
4	*A-1345-810-A	D BOARD, COMPLETE (KV-M19TD ONLY)	
	*A-1345-811-A	D BOARD, COMPLETE (KV-M19D ONLY)	
5	*A-1135-528-A	B BOARD, COMPLETE	
6	⚠1-463-881-11	TUNER, ET (UV-617)	
7	⚠1-439-432-11	TRANSFORMER ASSY, FLYBACK	
8	*1-626-517-12	F BOARD	
9	4-386-611-01	COVER, SWITCH	
10	⚠1-571-433-11	SWITCH, PUSH (AC POWER)	
11	*4-386-620-01	COVER, POWER	
12	⚠4-389-202-01	HOLDER, AC CODE	
13	⚠1-559-346-11	CORD, POWER (WITH CONNECTOR)	
14	4-389-379-01	COVER, REAR	
15	*A-1347-031-A	V BOARD, COMPLETE (KV-M19TD ONLY)	

6-2. BEZEL



No.	Part No
51	X-4389-
52	4-389-3
53	4-386-7
54	4-389-3
55	4-389-3
56	4-389-3
57	4-367-2
58	*4-389-3
59	4-391-4
60	1-503-2
61	⚠8-737-9
62	3-703-0
63	4-365-8

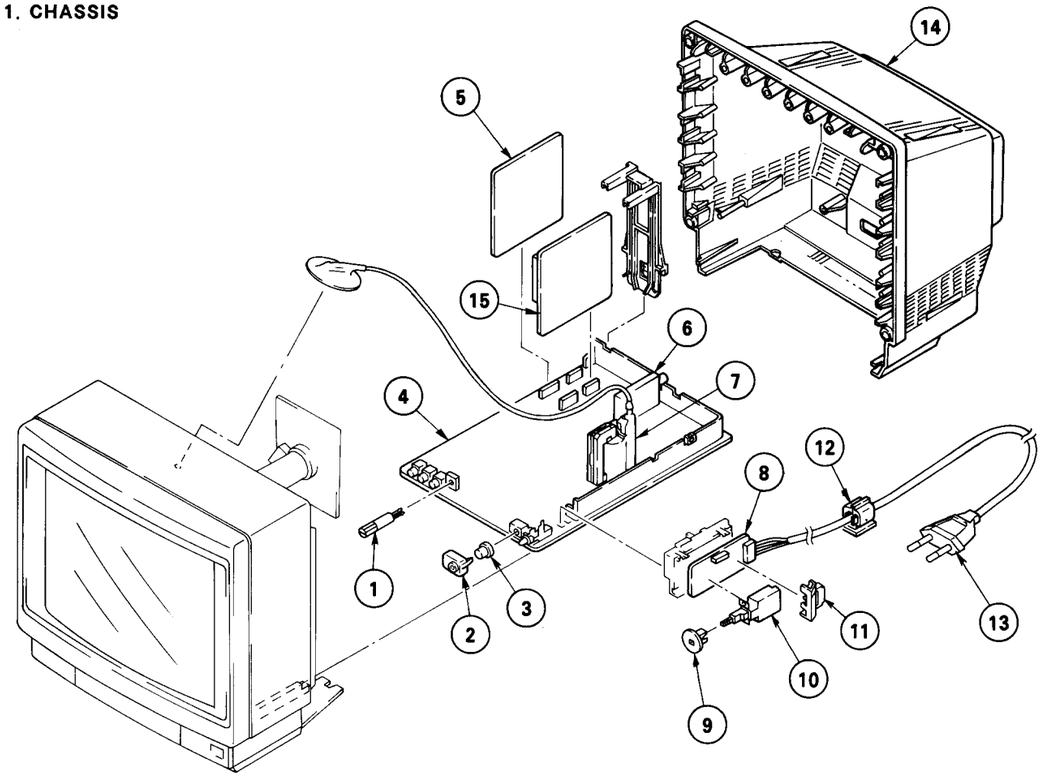
KV-M19D/M19TD RM-658 RM-657

SECTION 6
EXPLODED VIEWS

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

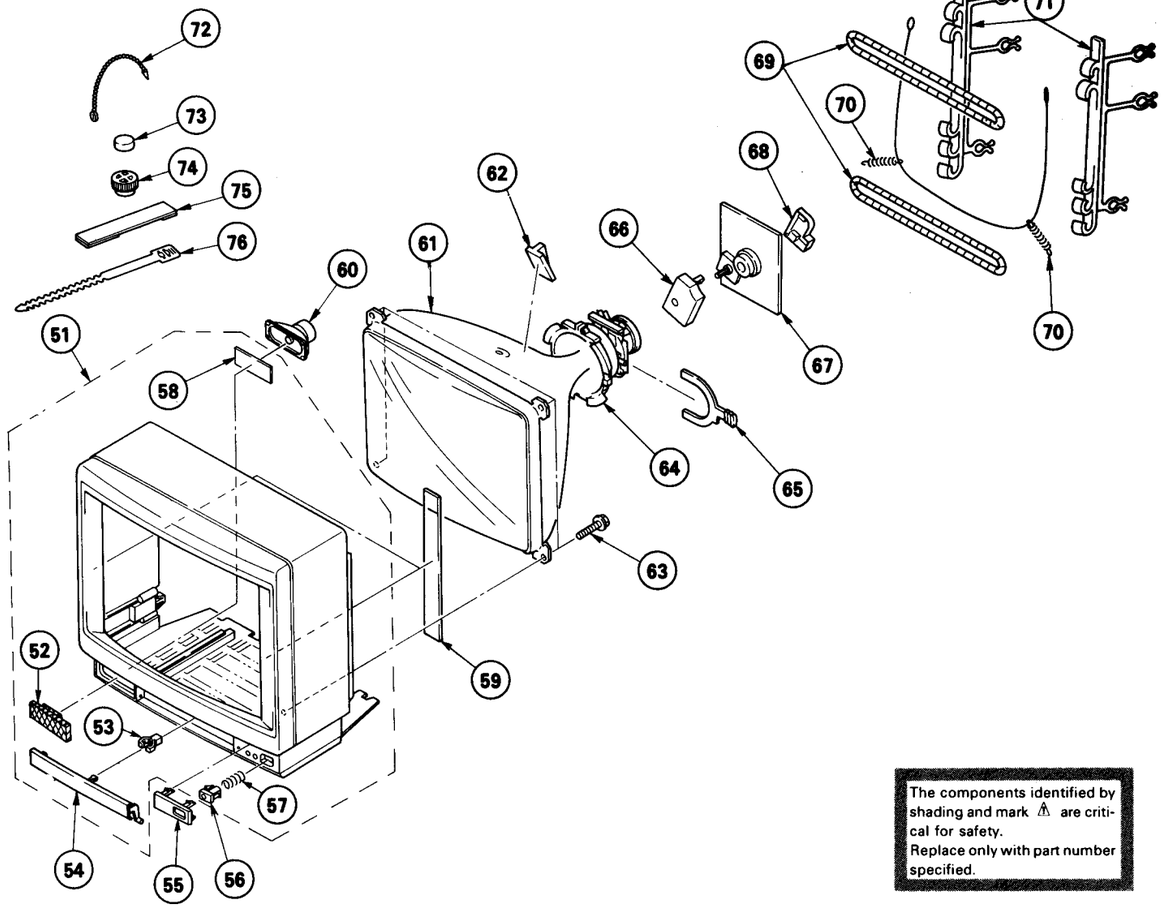
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CHASSIS



No.	Part No.	Description	Remark
1	4-389-302-01	KNOB, VOLUME	
2	*4-388-955-01	BRACKET (B), LIGHT GUIDE	
3	*4-374-987-01	GUIDE, LIGHT	
4	*A-1345-810-A	D BOARD, COMPLETE (KV-M19TD ONLY)	
	*A-1345-811-A	D BOARD, COMPLETE (KV-M19D ONLY)	
5	*A-1135-528-A	B BOARD, COMPLETE	
6	⚠1-463-881-11	TUNER, ET (UV-617)	
7	⚠1-439-432-11	TRANSFORMER ASSY, FLYBACK	
8	*1-626-517-12	F BOARD	
9	4-386-611-01	COVER, SWITCH	
10	⚠1-571-433-11	SWITCH, PUSH (AC POWER)	
11	*4-386-620-01	COVER, POWER	
12	⚠4-389-202-01	HOLDER, AC CODE	
13	⚠1-559-346-11	CORD, POWER (WITH CONNECTOR)	
14	4-389-379-01	COVER, REAR	
15	*A-1347-031-A	V BOARD, COMPLETE (KV-M19TD ONLY)	

6-2. BEZEL



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

No.	Part No.	Description	Remark
51	X-4389-319-1	BEZNET ASSY	52-54,56-58
52	4-389-374-01	GRILLE, SPEAKER	
53	4-386-710-01	CATCHER, PUSH	
54	4-389-377-01	DOOR, CONTROL	
55	4-389-373-01	PLATE, ORNAMENTAL	
56	4-389-375-01	BUTTON, POWER	
57	4-367-209-00	SPRING, COMPRESSION	
58	*4-389-372-01	CUSHION, SPEAKER	
59	4-391-409-01	CUSHION (L), PICTURE TUBE	
60	1-503-258-21	SPEAKER	
61	⚠8-737-951-05	PICTURE TUBE (A46JNL10X)	
62	3-703-003-00	SPACER, DY	
63	4-365-808-00	SCREW (5), TAPPING	
64	⚠1-451-279-21	DEFLECTION YOKE (SY165)	
65	1-452-277-00	MAGNET, BMC	
66	*4-374-717-01	COVER (MAIN), CV VOL	
67	*A-1330-905-A	C BOARD, COMPLETE	
68	*4-374-704-01	COVER (REAR LID), CV VOL	
69	⚠1-426-359-31	COIL, DEMAGNETIZATION	
70	4-369-318-00	SPRING, TENSION	
71	*4-386-622-01	BAND, DGC	
72	4-308-870-00	CLIP, LEAD WIRE	
73	1-452-032-00	MAGNET, DISK; 10MM ø	
74	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ø	
75	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
76	3-701-007-00	BAND, BINDING	

SECTION 7
ELECTRICAL PARTS LIST

B

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

Note: In this parts list, the mounting diagram is for a different product. Therefore, an excess of parts is listed.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1135-528-A	B BOARD, COMPLETE **********			
		<CAPACITOR>			
C301	1-106-220-00	MYLAR	0.1MF	10% 100V	
C302	1-124-120-11	ELECT	220MF	20% 16V	
C303	1-101-005-00	CERAMIC	0.022MF	50V	
C304	1-106-367-00	MYLAR	0.01MF	10% 400V	
C305	1-102-971-00	CERAMIC	82PF	5% 50V	
C306	1-101-006-00	CERAMIC	0.047MF	50V	
C307	1-101-004-00	CERAMIC	0.01MF	50V	
C308	1-101-888-00	CERAMIC	68PF	5% 50V	
C309	1-102-816-00	CERAMIC	120PF	5% 50V	
C310	1-102-978-00	CERAMIC	220PF	5% 50V	
C311	1-102-953-00	CERAMIC	18PF	5% 50V	
C312	1-102-953-00	CERAMIC	18PF	5% 50V	
C313	1-102-816-00	CERAMIC	120PF	5% 50V	
C314	1-102-978-00	CERAMIC	220PF	5% 50V	
C318	1-102-074-00	CERAMIC	0.001MF	10% 50V	
C319	1-106-375-12	MYLAR	0.022MF	10% 250V	
C320	1-102-935-00	CERAMIC	2PF	0.25PF 50V	
C321	1-130-785-11	MYLAR	0.47MF	10% 100V	
C322	1-106-383-00	MYLAR	0.047MF	10% 100V	
C323	1-124-499-11	ELECT	1MF	20% 50V	
C324	1-102-074-00	CERAMIC	0.001MF	10% 50V	
C325	1-101-004-00	CERAMIC	0.01MF	50V	
C326	1-101-361-00	CERAMIC	150PF	5% 50V	
C327	1-101-004-00	CERAMIC	0.01MF	50V	
C328	1-124-120-11	ELECT	220MF	20% 16V	
C329	1-131-367-00	TANTALUM	22MF	10% 16V	
C330	1-102-973-00	CERAMIC	100PF	5% 50V	
C331	1-124-927-11	ELECT	4.7MF	20% 50V	
C332	1-130-783-00	MYLAR	0.33MF	10% 100V	
C333	1-124-499-11	ELECT	1MF	20% 50V	
C334	1-106-375-12	MYLAR	0.022MF	10% 250V	
C335	1-106-375-12	MYLAR	0.022MF	10% 250V	
C336	1-124-927-11	ELECT	4.7MF	20% 50V	
C337	1-130-834-00	MYLAR	1MF	10% 63V	
C339	1-106-375-12	MYLAR	0.022MF	10% 250V	
C340	1-130-783-00	MYLAR	0.33MF	10% 100V	
C341	1-130-783-00	MYLAR	0.33MF	10% 100V	
C342	1-124-120-11	ELECT	220MF	20% 16V	
C343	1-106-375-12	MYLAR	0.022MF	10% 250V	
C344	1-106-375-12	MYLAR	0.022MF	10% 250V	
C345	1-106-375-12	MYLAR	0.022MF	10% 250V	
C346	1-101-880-00	CERAMIC	47PF	5% 50V	
C347	1-106-375-12	MYLAR	0.022MF	10% 250V	
C348	1-106-375-12	MYLAR	0.022MF	10% 250V	
C349	1-106-375-12	MYLAR	0.022MF	10% 250V	
C350	1-124-917-11	ELECT	33MF	20% 50V	
C351	1-101-888-00	CERAMIC	68PF	5% 50V	
C352	1-124-120-11	ELECT	220MF	20% 16V	
		<CONNECTOR>			
CNB31	*1-560-126-00	PLUG, CONNECTOR (2.5MM) 6P			
CNB32	*1-565-393-11	CONNECTOR, BOARD TO BOARD			
CNB33	*1-565-393-11	CONNECTOR, BOARD TO BOARD			
		<TRIMMER>			
CT301	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)			
		<DIODE>			
D301	8-719-911-19	DIODE 1SS119			
D303	8-719-911-19	DIODE 1SS119			
D304	8-719-911-19	DIODE 1SS119			
D305	8-719-911-19	DIODE 1SS119			
D306	8-719-911-19	DIODE 1SS119			
D307	8-719-911-19	DIODE 1SS119			
D308	8-719-911-19	DIODE 1SS119			
D310	8-719-911-19	DIODE 1SS119			
D311	8-719-911-19	DIODE 1SS119			
D312	8-719-911-19	DIODE 1SS119			
D313	8-719-911-19	DIODE 1SS119			
D314	8-719-911-19	DIODE 1SS119			
D315	8-719-911-19	DIODE 1SS119			
D316	8-719-911-19	DIODE 1SS119			
D317	8-719-911-19	DIODE 1SS119			
D318	8-719-911-19	DIODE 1SS119			
		<DELAY LINE>			
DL301	1-415-122-00	DELAY LINE			
		<IC>			
IC301	8-759-947-20	IC TDA4555-V8			
IC302	8-759-947-19	IC TDA3505-V9			
		<COIL>			
L301	1-408-423-00	INDUCTOR	150UH		
L302	1-408-408-00	INDUCTOR	8.2UH		
L303	1-404-539-11	COIL			
L304	1-404-554-11	COIL			
L305	1-404-554-11	COIL			
L306	1-404-554-11	COIL			
L307	1-408-423-00	INDUCTOR	150UH		
L308	1-404-495-00	COIL			

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

B F C

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<TRANSISTOR>				
Q301	8-729-178-54	TRANSISTOR 2SC2785				
Q302	8-729-178-54	TRANSISTOR 2SC2785				
Q303	8-729-178-54	TRANSISTOR 2SC2785				
Q304	8-729-178-54	TRANSISTOR 2SC2785				
Q305	8-729-178-54	TRANSISTOR 2SC2785				
Q307	8-729-178-54	TRANSISTOR 2SC2785				
Q308	8-729-900-80	TRANSISTOR DTC114ES				
Q309	8-729-117-54	TRANSISTOR 2SA1175				
		<RESISTOR>				
R301	1-249-418-11	CARBON	1.2K	5%	1/4W	
R302	1-249-401-11	CARBON	47	5%	1/4W	
R303	1-249-412-11	CARBON	390	5%	1/4W	
R304	1-249-408-11	CARBON	180	5%	1/4W	
R305	1-249-416-11	CARBON	820	5%	1/4W	
R306	1-249-419-11	CARBON	1.5K	5%	1/4W	
R307	1-249-431-11	CARBON	15K	5%	1/4W	
R308	1-249-417-11	CARBON	1K	5%	1/4W	
R309	1-249-409-11	CARBON	220	5%	1/4W	
R310	1-247-891-00	CARBON	330K	5%	1/4W	
R311	1-247-891-00	CARBON	330K	5%	1/4W	
R312	1-249-405-11	CARBON	100	5%	1/4W	
R313	1-249-405-11	CARBON	100	5%	1/4W	
R314	1-249-405-11	CARBON	100	5%	1/4W	
R315	1-249-437-11	CARBON	47K	5%	1/4W	
R316	1-249-404-00	CARBON	82	5%	1/4W	
R317	1-249-429-11	CARBON	10K	5%	1/4W	
R318	1-247-848-11	CARBON	5.1K	5%	1/4W	
R319	1-249-419-11	CARBON	1.5K	5%	1/4W	
R320	1-249-437-11	CARBON	47K	5%	1/4W	
R321	1-249-418-11	CARBON	1.2K	5%	1/4W	
R322	1-249-417-11	CARBON	1K	5%	1/4W	
R323	1-249-410-11	CARBON	270	5%	1/4W	
R324	1-249-421-11	CARBON	2.2K	5%	1/4W	
R325	1-249-419-11	CARBON	1.5K	5%	1/4W	
R326	1-249-417-11	CARBON	1K	5%	1/4W	
R327	1-249-415-11	CARBON	680	5%	1/4W	
R328	1-249-437-11	CARBON	47K	5%	1/4W	
R329	1-247-891-00	CARBON	330K	5%	1/4W	
R330	1-249-440-11	CARBON	82K	5%	1/4W	
R331	1-247-895-00	CARBON	470K	5%	1/4W	
R332	1-247-903-00	CARBON	1M	5%	1/4W	
R333	1-214-907-00	METAL	56K	1%	W	
R334	1-249-426-11	CARBON	5.6K	5%	1/4W	
R335	1-249-439-11	CARBON	68K	5%	1/4W	
R336	1-249-425-11	CARBON	4.7K	5%	1/4W	
R337	1-249-413-11	CARBON	470	5%	1/4W	
R338	1-249-413-11	CARBON	470	5%	1/4W	
R341	1-249-431-11	CARBON	15K	5%	1/4W	
R343	1-247-885-00	CARBON	180K	5%	1/4W	
R344	1-249-432-11	CARBON	18K	5%	1/4W	
R345	1-249-433-11	CARBON	22K	5%	1/4W	
R346	1-249-413-11	CARBON	470	5%	1/4W	
R347	1-249-417-11	CARBON	1K	5%	1/4W	
R348	1-249-435-11	CARBON	33K	5%	1/4W	
R349	1-249-436-11	CARBON	39K	5%	1/4W	
R350	1-249-436-11	CARBON	39K	5%	1/4W	
R352	1-249-437-11	CARBON	47K	5%	1/4W	
R353	1-249-413-11	CARBON	470	5%	1/4W	
R355	1-247-887-00	CARBON	220K	5%	1/4W	
R356	1-247-887-00	CARBON	220K	5%	1/4W	
R357	1-249-417-11	CARBON	1K	5%	1/4W	
		<VARIABLE RESISTOR>				
RV301	1-238-009-11	RES, ADJ, CARBON 220				
RV302	1-238-016-11	RES, ADJ, CARBON 10K				
		<TRANSFORMER>				
T301	1-404-584-11	COIL				
		<CRYSTAL>				
X301	1-567-131-00	OSCILLATOR, CRYSTAL				
		<YC MODULE>				
YCM301	1-235-753-21	YC MODULE				
		**********				
	*1-626-517-12	F BOARD				
		*******				
		<CONNECTOR>				
CNF61	*1-566-664-11	PIN, CONNECTOR 4P				
CNF62	*1-566-664-11	PIN, CONNECTOR 4P				
		<FUSE>				
F601	⚠1-576-016-11	FUSE, GLASS-TUBE (TIME-LAG) 3.15A/250V				
	1-533-087-00	HOLDER, FUSE; F601				
		<SWITCH>				
S601	⚠1-571-433-11	SWITCH, PUSH (AC POWER)				
		**********				
	*A-1330-905-A	C BOARD, COMPLETE				
		**********				
	*4-374-704-01	COVER (REAR LID), CV VOL				
	*4-374-717-01	COVER (MAIN), CV VOL				
		<CAPACITOR>				
C701	1-102-980-00	CERAMIC	270PF	5%	50V	
C702	1-102-980-00	CERAMIC	270PF	5%	50V	
C703	1-102-820-00	CERAMIC	330PF	5%	50V	
C704	1-102-114-00	CERAMIC	470PF	10%	50V	
C705	1-102-114-00	CERAMIC	470PF	10%	50V	
C706	1-102-114-00	CERAMIC	470PF	10%	50V	
C707	1-123-947-00	ELECT	10MF	20%	250V	
C708	1-162-116-00	CERAMIC	680PF	10%	2KV	
C709	1-136-666-11	FILM	0.01MF	5%	1KV	
C710	1-124-477-11	ELECT	47MF	20%	16V	
C711	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C712	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C713	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C714	1-162-318-11	CERAMIC	0.001MF	10%	500V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<CONNECTOR>	
CNC71	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CNC72	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
CNC73	*1-560-126-00	PLUG, CONNECTOR (2.5MM) 6P	
CNC74	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
		<DIODE>	
D701	8-719-911-19	DIODE 1SS119	
D702	8-719-911-19	DIODE 1SS119	
D703	8-719-911-19	DIODE 1SS119	
D704	8-719-911-19	DIODE 1SS119	
D705	8-719-911-19	DIODE 1SS119	
D706	8-719-911-19	DIODE 1SS119	
D707	8-719-911-19	DIODE 1SS119	
D708	8-719-911-19	DIODE 1SS119	
D709	8-719-911-19	DIODE 1SS119	
		<JACK>	
J901	1-526-814-11	SOCKET, PICTURE TUBE	
		<COIL>	
L701	1-407-496-00	INDUCTOR 2.2MMH	
		<TRANSISTOR>	
Q701	8-729-178-54	TRANSISTOR 2SC2785	
Q702	8-729-178-54	TRANSISTOR 2SC2785	
Q703	8-729-178-54	TRANSISTOR 2SC2785	
Q704	8-729-906-70	TRANSISTOR BF871	
Q705	8-729-906-70	TRANSISTOR BF871	
Q706	8-729-906-70	TRANSISTOR BF871	
Q707	8-729-200-17	TRANSISTOR 2SA1091R	
Q708	8-729-200-17	TRANSISTOR 2SA1091R	
Q709	8-729-200-17	TRANSISTOR 2SA1091R	
		<RESISTOR>	
R701	1-249-423-11	CARBON 3.3K 5% 1/4W	
R702	1-249-423-11	CARBON 3.3K 5% 1/4W	
R703	1-249-415-11	CARBON 680 5% 1/4W	
R704	1-249-415-11	CARBON 680 5% 1/4W	
R705	1-249-401-11	CARBON 47 5% 1/4W	
R706	1-249-401-11	CARBON 47 5% 1/4W	
R707	1-249-401-11	CARBON 47 5% 1/4W	
R708	1-249-417-11	CARBON 1K 5% 1/4W	
R709	1-249-416-11	CARBON 820 5% 1/4W	
R710	1-249-413-11	CARBON 470 5% 1/4W	
R711	1-214-937-00	METAL 1M 1% W	
R712	1-214-931-00	METAL 560K 1% W	
R713	1-214-917-00	METAL 150K 1% W	
R714	1-249-417-11	CARBON 1K 5% 1/4W	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	1-249-417-11	CARBON 1K 5% 1/4W	
R717	1-202-824-00	SOLID 3.3K 10% 1/2W	
R718	1-202-824-00	SOLID 3.3K 10% 1/2W	
R719	1-202-824-00	SOLID 3.3K 10% 1/2W	
R720	1-216-463-00	METAL OXIDE 12K 5% 2W	
R721	1-216-463-00	METAL OXIDE 12K 5% 2W	
R722	1-216-463-00	METAL OXIDE 12K 5% 2W	
R726	1-202-719-00	SOLID 1M 10% 1/2W	
R727	1-202-838-00	SOLID 100K 10% 1/2W	
R728	1-202-842-11	SOLID 220K 10% 1/2W	
R729	1-216-348-00	WIREWOUND 0.82 10% 1/2W	
R731	1-202-719-00	SOLID 1M 10% 1/2W	
R732	1-247-895-00	CARBON 470K 5% 1/4W	
R734	1-249-421-11	CARBON 2.2K 5% 1/4W	
R735	1-249-421-11	CARBON 2.2K 5% 1/4W	
R736	1-249-421-11	CARBON 2.2K 5% 1/4W	
		<VARIABLE RESISTOR>	
RV701	1-237-749-11	RES, ADJ, CARBON 2200	
RV702	1-237-749-11	RES, ADJ, CARBON 2200	
RV703	1-230-641-21	RES, ADJ, METAL GLAZE 2.2M	
RV704	1-230-641-21	RES, ADJ, METAL GLAZE 2.2M	
RV705	1-230-619-11	RES, ADJ, METAL GLAZE 110M	
		**********	
	*A-1345-810-A	D BOARD, COMPLETE (KV-M19TD ONLY)	
		**********	
	*A-1345-811-A	D BOARD, COMPLETE (KV-M19D ONLY)	
		**********	
	*4-341-751-01	EYELET	
	*4-341-752-01	EYELET	
		<CAPACITOR>	
C001	1-126-233-11	ELECT 22MF 20% 50V	
C002	1-124-499-11	ELECT 1MF 20% 50V	
C003	1-124-499-11	ELECT 1MF 20% 50V	
C004	1-102-973-00	CERAMIC 100PF 5% 50V	
C005	1-106-220-00	MYLAR 0.1MF 10% 100V	
C007	1-124-927-11	ELECT 4.7MF 20% 50V	
C009	1-102-111-00	CERAMIC 270PF 10% 50V	
C010	1-102-965-00	CERAMIC 39PF 5% 50V	
C011	1-102-965-00	CERAMIC 39PF 5% 50V	
C012	1-101-004-00	CERAMIC 0.01MF 50V	
C013	1-102-959-00	CERAMIC 22PF 5% 50V	
C014	1-101-004-00	CERAMIC 0.01MF 50V	
C015	1-124-479-11	ELECT 330MF 20% 25V	
C016	1-102-978-00	CERAMIC 220PF 5% 50V	
C019	1-126-233-11	ELECT 22MF 20% 50V	
C020	1-126-233-11	ELECT 22MF 20% 50V	
C022	1-101-004-00	CERAMIC 0.01MF 50V	
C033	1-101-004-00	CERAMIC 0.01MF 50V	
C034	1-126-101-11	ELECT 100MF 20% 16V (KV-M19D ONLY)	
C037	1-101-004-00	CERAMIC 0.01MF 50V	
C041	1-102-116-00	CERAMIC 680PF 10% 50V	
C043	1-102-978-00	CERAMIC 220PF 5% 50V	
C071	1-106-220-00	MYLAR 0.1MF 10% 100V	
C072	1-106-383-00	MYLAR 0.047MF 10% 100V	
C073	1-101-004-00	CERAMIC 0.01MF 50V	
C075	1-102-074-00	CERAMIC 0.001MF 1% 50V	
C076	1-102-125-00	CERAMIC 0.0047MF 1% 50V	
C151	1-124-477-11	ELECT 47MF 2% 16V	
C152	1-124-480-11	ELECT 470MF 2% 25V	
C154	1-106-216-00	MYLAR 0.068MF 1% 100V	
C155	1-106-216-00	MYLAR 0.068MF 1% 100V	
C156	1-101-004-00	CERAMIC 0.01MF 50V	
C157	1-102-963-00	CERAMIC 33PF 5% 50V	
C158	1-124-477-11	ELECT 47MF 2% 16V	
C163	1-101-003-00	CERAMIC 0.0047MF 50V	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

D

REF.NO.	PART NO.	DESCRIPTION			REMARK
C164	1-101-003-00	CERAMIC	0.0047MF		50V
C201	1-124-479-11	ELECT	330MF	20%	25V
C202	1-106-220-00	MYLAR	0.1MF	10%	100V
C203	1-124-791-11	ELECT	1MF	20%	50V
C204	1-106-383-00	MYLAR	0.047MF	10%	100V
C205	1-123-875-11	ELECT	10MF	20%	50V
C206	1-106-379-12	MYLAR	0.033MF	10%	250V
C207	1-106-220-00	MYLAR	0.1MF	10%	100V
C208	1-126-104-11	ELECT	470MF	20%	25V
C209	1-102-074-00	CERAMIC	0.001MF	10%	50V
C210	1-102-074-00	CERAMIC	0.001MF	10%	50V
C212	1-102-973-00	CERAMIC	100PF	5%	50V
C213	1-101-005-00	CERAMIC	0.022MF		50V
C402	1-101-003-00	CERAMIC	0.0047MF		50V
C404	1-102-114-00	CERAMIC	470PF	10%	50V
C405	1-124-902-00	ELECT	0.47MF	20%	50V
C406	1-124-477-11	ELECT	47MF	20%	16V
C407	1-124-902-00	ELECT	0.47MF	20%	50V
C409	1-124-477-11	ELECT	47MF	20%	16V
C410	1-124-477-11	ELECT	47MF	20%	16V
C411	1-102-074-00	CERAMIC	0.001MF	10%	50V
C412	1-126-101-11	ELECT	100MF	20%	16V
C413	1-126-233-11	ELECT	22MF	20%	50V
C415	1-126-233-11	ELECT	22MF	20%	50V
C417	1-101-005-00	CERAMIC	0.022MF		50V
C418	1-102-074-00	CERAMIC	0.001MF	10%	50V
C433	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C501	1-101-004-00	CERAMIC	0.01MF		50V
C502	1-102-117-00	CERAMIC	820PF	10%	50V
C503	1-101-880-00	CERAMIC	47PF	5%	50V
C504	1-124-480-11	ELECT	470MF	20%	25V
C505	1-124-122-11	ELECT	100MF	20%	50V
C506	1-110-331-81	MYLAR	0.68MF	10%	63V
C507	1-124-913-11	ELECT	470MF	20%	50V
C508	1-106-220-00	MYLAR	0.1MF	10%	100V
C510	1-126-233-11	ELECT	22MF	20%	50V
C551	1-124-927-11	ELECT	4.7MF	20%	50V
C552	1-124-927-11	ELECT	4.7MF	20%	50V
C553	1-106-220-00	MYLAR	0.1MF	10%	100V
C554	1-126-233-11	ELECT	22MF	20%	50V
C555	1-124-925-11	ELECT	2.2MF	20%	50V
C556	1-101-361-00	CERAMIC	150PF	5%	50V
C557	1-130-783-00	MYLAR	0.33MF	10%	100V
C558	1-130-783-00	MYLAR	0.33MF	10%	100V
C559	1-106-357-00	MYLAR	0.0039MF	10%	400V
C560	1-126-101-11	ELECT	100MF	20%	16V
C561	1-106-220-00	MYLAR	0.1MF	10%	100V
C562	1-161-961-00	CERAMIC	0.0022MF	10%	3KV
C563	1-124-477-11	ELECT	47MF	20%	16V
C564	1-129-794-00	FILM	0.0033MF	2%	100V
C565	1-106-228-00	MYLAR	0.22MF	10%	100V
C566	1-102-942-00	CERAMIC	5PF	1PF	50V
C567	1-106-371-00	MYLAR	0.015MF	10%	400V
C568	1-161-961-00	CERAMIC	0.0022MF	10%	3KV
C570	1-124-902-00	ELECT	0.47MF	20%	50V
C571	1-126-101-11	ELECT	100MF	20%	16V
C601 ⚠	1-161-964-61	CERAMIC	0.0047MF		250V
C602 ⚠	1-161-964-61	CERAMIC	0.0047MF		250V
C603	1-161-964-11	CERAMIC	0.0047MF		250V
C604	1-125-293-00	ELECT(BLOCK)	220MF		400V
C605	1-161-754-00	CERAMIC	0.001MF	10%	2KV
C606	1-136-637-11	FILM	0.047MF	10%	630V
C607	1-106-383-00	MYLAR	0.047MF	10%	100V
C608	1-162-116-00	CERAMIC	680PF	10%	2KV

REF.NO.	PART NO.	DESCRIPTION			REMARK
C609	1-124-494-00	ELECT	33MF		160V
C610	1-124-557-11	ELECT	1000MF	20%	25V
C614	1-126-101-11	ELECT	100MF	20%	16V
C615 ⚠	1-162-578-51	CERAMIC	0.0047MF	20%	400V
C616 ⚠	1-162-578-51	CERAMIC	0.0047MF	20%	400V
C618	1-126-233-11	ELECT	22MF	20%	50V
C620 ⚠	1-136-519-11	FILM	0.47MF	20%	300V
C621 ⚠	1-136-519-11	FILM	0.47MF	20%	300V
C622 ⚠	1-162-578-51	CERAMIC	0.0047MF	20%	400V
C623 ⚠	1-162-578-51	CERAMIC	0.0047MF	20%	400V
C626 ⚠	1-102-316-91	CERAMIC	15PF	5%	500V
C629	1-102-316-00	CERAMIC	15PF	5%	500V
C631	1-102-244-00	CERAMIC	220PF	10%	500V
C801	1-124-499-11	ELECT	1MF	20%	50V
C802	1-123-932-00	ELECT	4.7MF	20%	160V
C803	1-106-383-00	MYLAR	0.047MF	10%	100V
C804	1-106-357-00	MYLAR	0.0039MF	10%	400V
C805	1-102-244-00	CERAMIC	220PF	10%	500V
C806 ⚠	1-161-731-11	CERAMIC	0.001MF	10%	2KV
C807	1-130-834-00	MYLAR	1MF	10%	63V
C808	1-136-653-11	FILM	0.033MF	10%	250V
C812 ⚠	1-136-073-11	FILM	0.0073MF	3%	2KV
C813	1-102-074-00	CERAMIC	0.001MF	10%	50V
C814	1-126-233-11	ELECT	22MF	20%	50V
C815	1-124-634-11	ELECT	1MF	20%	250V
C818	1-126-101-11	ELECT	100MF	20%	16V
C821	1-106-226-00	MYLAR	0.18MF	10%	100V
C822	1-136-540-11	FILM	0.82MF	5%	160V
C825	1-106-367-00	MYLAR	0.01MF	10%	400V
C851	1-123-948-00	ELECT	22MF	20%	250V
C852	1-162-114-00	CERAMIC	0.0047MF		2KV
C853	1-162-318-11	CERAMIC	0.001MF	10%	500V
C856	1-162-318-11	CERAMIC	0.001MF	10%	500V
C857	1-106-375-12	MYLAR	0.022MF	10%	250V
C858	1-123-357-00	ELECT	22MF	20%	50V
C859	1-126-101-11	ELECT	100MF	20%	16V
C860	1-102-228-00	CERAMIC	470PF	10%	500V

<FILTER>

CF001	1-577-082-11	VIBRATOR, CERAMIC

<CONNECTOR>

CND21	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)
CND42	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR
CND43	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR
CND44	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR (KV-M19TD ONLY)
CND45	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR (KV-M19TD ONLY)
CND61	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
CND62	*1-565-458-11	PIN, CONNECTOR 3P
CND81	*1-564-038-00	CONNECTOR PLUG, DY (MINI) 6P
CND82	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P
CND83	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P

<DIODE>

D002	8-719-911-19	DIODE 1SS119
D003	8-719-911-19	DIODE 1SS119
D004	8-719-911-19	DIODE 1SS119
D005	8-719-970-79	DIODE PLEDH544CL-6

D

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*4-389-319-01	HOLDER, LED; D005	
D007	8-719-911-19	DIODE 1SS119	
D008	8-719-911-19	DIODE 1SS119	
D009	8-719-911-19	DIODE 1SS119	
D010	8-719-911-19	DIODE 1SS119	
D011	8-719-911-19	DIODE 1SS119	
D016	8-719-911-19	DIODE 1SS119	
D017	8-719-911-19	DIODE 1SS119	
D019	8-719-911-19	DIODE 1SS119	
D025	8-719-109-71	DIODE RD3.9ES-B1	
D151	8-719-911-19	DIODE 1SS119	
D156	8-719-911-19	DIODE 1SS119	
D201	8-719-911-19	DIODE 1SS119	
D402	8-719-109-96	DIODE RD6.8ES-B1	
D403	8-719-109-96	DIODE RD6.8ES-B1	
D404	8-719-109-96	DIODE RD6.8ES-B1	
D405	8-719-911-19	DIODE 1SS119	
D406	8-719-911-19	DIODE 1SS119	
D407	8-719-911-19	DIODE 1SS119	
D408	8-719-911-19	DIODE 1SS119	
D410	8-719-911-19	DIODE 1SS119	
D411	8-719-911-19	DIODE 1SS119	
D413	8-719-110-30	DIODE RD12ES-B1	
D414	8-719-911-19	DIODE 1SS119	
D415	8-719-911-19	DIODE 1SS119	
D416	8-719-911-19	DIODE 1SS119	
D419	8-719-911-19	DIODE 1SS119	
D420	8-719-911-19	DIODE 1SS119	
D421	8-719-911-19	DIODE 1SS119	
D501	8-719-936-83	DIODE GP08DPKG23	
D551	8-719-936-83	DIODE GP08DPKG23	
D601	8-719-946-90	DIODE KBU4JL-6088	
D602	8-719-300-65	DIODE ES1F	
D603	8-719-936-83	DIODE GP08DPKG23	
D604	8-719-901-58	DIODE RGP15J	
D605	8-719-924-06	DIODE ERC24-06S	
D606	8-719-908-06	DIODE ERA81-004	
D607	8-719-924-06	DIODE ERC24-06S	
D608	8-719-924-06	DIODE ERC24-06S	
D609	8-719-936-83	DIODE GP08DPKG23	
D610	8-719-936-83	DIODE GP08DPKG23	
D611	8-719-303-49	DIODE R2M	
D801	8-719-945-80	DIODE ERC06-15S	
D802	8-719-901-58	DIODE RGP15J	
D851	8-719-924-06	DIODE ERC24-06S	
D852	8-719-300-65	DIODE ES1F	
D853	8-719-924-06	DIODE ERC24-06S	
D855	8-719-924-06	DIODE ERC24-06S	
D857	8-719-936-83	DIODE GP08DPKG23	
D858	8-719-936-83	DIODE GP08DPKG23	
		<IC>	
IC001	8-759-630-92	IC M50436-616SP	
IC001	8-759-631-23	IC M50436-618SP	
IC002	8-752-324-79	IC CXK1012P	
IC003	8-741-139-80	IC BX-1398	
IC004	8-759-157-40	IC UPC574J	
IC005	8-759-105-33	IC UPC78L05J	
IC201	8-759-980-45	IC TDA1013A-N4	
IC401	8-759-240-53	IC TC4053BP	
IC402	8-759-946-32	IC TEA2014A	
IC501	8-759-113-05	IC UPC1488H	
	*4-368-683-01	SPRING; IC501	
IC551	8-759-973-52	IC TDA2579A-N7	
IC601	8-749-901-65	IC STR54041	
	4-365-216-00	SPACER, MICA; IC601	
	*4-368-683-01	SPRING; IC601	
IC801	8-759-145-58	IC UPC4558C	
IC851	8-759-170-12	IC UPC78M12H	
	*4-368-683-01	SPRING; IC 851	
		<JACK>	
J201	1-507-678-00	JACK	
J401	1-561-534-00	SOCKET 21P	
J402	1-563-500-11	JACK BLOCK, PIN (L TYPE) 2P	
		<COIL>	
L002	1-408-411-00	INDUCTOR 15UH	
L003	1-408-409-00	INDUCTOR 10UH	
L004	1-408-415-00	INDUCTOR 33UH	
L005	1-410-663-31	INDUCTOR 10UH	
L151	1-408-226-00	INDUCTOR 82UH	
L152	1-410-683-31	INDUCTOR 560UH	
L153	1-408-399-00	INDUCTOR 1.5UH	
L201	1-408-409-00	INDUCTOR 10UH	
L202	1-408-409-00	INDUCTOR 10UH	
L401	1-408-417-00	INDUCTOR 47UH	
L403	1-408-409-00	INDUCTOR 10UH	
L501	1-408-226-00	INDUCTOR 82UH	
L803	1-407-365-00	COIL, CHOKE	
L804	1-459-881-11	COIL, CHOKE 2.7MMH	
L805	1-459-635-11	HLC	
L806	1-459-856-11	COIL, FERRITE	
L821	1-459-881-11	COIL, CHOKE 2.7MMH	
L822	1-410-067-21	INDUCTOR 4.7MMH	
L823	1-459-855-11	COIL, FERRITE	
		<IC LINK>	
PS501⚠	1-532-679-91	LINK, IC 0.6A	
PS802⚠	1-532-679-91	LINK, IC 0.6A	
		<TRANSISTOR>	
Q001	8-729-900-36	TRANSISTOR DTC124ES	
Q003	8-729-900-63	TRANSISTOR DTA124ES	
Q004	8-729-178-54	TRANSISTOR 2SC2785	
Q005	8-729-178-54	TRANSISTOR 2SC2785	
Q008	8-729-900-36	TRANSISTOR DTC124ES	
Q009	8-729-900-74	TRANSISTOR DTC143TS	
Q012	8-729-117-54	TRANSISTOR 2SA1175	
Q015	8-729-178-54	TRANSISTOR 2SC2785	
Q071	8-729-117-54	TRANSISTOR 2SA1175	
Q151	8-729-900-61	TRANSISTOR DTA114ES	
Q152	8-729-900-61	TRANSISTOR DTA114ES	
Q154	8-729-900-61	TRANSISTOR DTA114ES	
Q155	8-729-178-54	TRANSISTOR 2SC2785	
Q158	8-729-901-59	TRANSISTOR BF199	
Q402	8-729-178-54	TRANSISTOR 2SC2785	
Q403	8-729-117-54	TRANSISTOR 2SA1175	
Q404	8-729-117-54	TRANSISTOR 2SA1175	
Q405	8-729-117-54	TRANSISTOR 2SA1175	
Q406	8-729-900-80	TRANSISTOR DTC114ES	
Q501	8-729-178-54	TRANSISTOR 2SC2785	
Q551	8-729-117-54	TRANSISTOR 2SA1175	

D

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q601	8-729-906-74	TRANSISTOR BC637-16	
Q801	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q802	8-729-906-69	TRANSISTOR BU506DF	
	*4-389-343-01	SPRING; Q802	
Q803	8-729-920-92	TRANSISTOR 2SD2096-EF	
Q804	8-729-178-54	TRANSISTOR 2SC2785	

<RESISTOR>

R001	1-249-438-11	CARBON	56K	5%	1/4W
R002	1-249-440-11	CARBON	82K	5%	1/4W
R004	1-249-439-11	CARBON	68K	5%	1/4W
R005	1-249-413-11	CARBON	470	5%	1/4W
R006	1-249-441-11	CARBON	100K	5%	1/4W
R008	1-249-429-11	CARBON	10K	5%	1/4W
R009	1-249-429-11	CARBON	10K	5%	1/4W
R010	1-249-433-11	CARBON	22K	5%	1/4W
R011	1-249-433-11	CARBON	22K	5%	1/4W
R012	1-249-433-11	CARBON	22K	5%	1/4W
R013	1-249-433-11	CARBON	22K	5%	1/4W
R014	1-215-900-11	METAL OXIDE	22K	5%	2W
R015	1-249-421-11	CARBON	2.2K	5%	1/4W
R016	1-249-433-11	CARBON	22K	5%	1/4W
R017	1-249-407-11	CARBON	150	5%	1/4W
R018	1-249-417-11	CARBON	1K	5%	1/4W
R019	1-249-413-11	CARBON	470	5%	1/4W
R020	1-249-413-11	CARBON	470	5%	1/4W
R021	1-249-413-11	CARBON	470	5%	1/4W
R022	1-249-411-11	CARBON	330	5%	1/4W
R023	1-249-416-11	CARBON	820	5%	1/4W
R025	1-249-417-11	CARBON	1K	5%	1/4W
R029	1-249-429-11	CARBON	10K	5%	1/4W
R030	1-249-429-11	CARBON	10K	5%	1/4W
R035	1-249-431-11	CARBON	15K	5%	1/4W
R037	1-249-429-11	CARBON	10K	5%	1/4W
R038	1-249-429-11	CARBON	10K	5%	1/4W
R039	1-249-417-11	CARBON	1K	5%	1/4W
R040	1-249-430-11	CARBON	12K	5%	1/4W
R042	1-249-433-11	CARBON	22K	5%	1/4W
R043	1-249-429-11	CARBON	10K	5%	1/4W
R044	1-249-433-11	CARBON	22K	5%	1/4W
R046	1-249-425-11	CARBON	4.7K	5%	1/4W
R051	1-249-427-11	CARBON	6.8K	5%	1/4W
R052	1-249-413-11	CARBON	470	5%	1/4W
R055	1-249-413-11	CARBON	470	5%	1/4W
R056	1-249-423-11	CARBON	3.3K	5%	1/4W
R058	1-249-429-11	CARBON	10K	5%	1/4W
R059	1-249-426-11	CARBON	5.6K	5%	1/4W
R060	1-249-417-11	CARBON	1K	5%	1/4W
R061	1-249-413-11	CARBON	470	5%	1/4W
R063	1-249-422-11	CARBON	2.7K	5%	1/4W
R064	1-249-417-11	CARBON	1K	5%	1/4W
R065	1-249-433-11	CARBON	22K	5%	1/4W
R066	1-249-425-11	CARBON	4.7K	5%	1/4W
R070	1-249-429-11	CARBON	10K	5%	1/4W
R071	1-249-413-11	CARBON	470	5%	1/4W
R072	1-249-441-11	CARBON	100K	5%	1/4W
R073	1-249-435-11	CARBON	33K	5%	1/4W
R074	1-249-429-11	CARBON	10K	5%	1/4W
R075	1-249-431-11	CARBON	15K	5%	1/4W
R076	1-249-423-11	CARBON	3.3K	5%	1/4W
R077	1-249-435-11	CARBON	33K	5%	1/4W
R078	1-249-427-11	CARBON	6.8K	5%	1/4W
R079	1-249-429-11	CARBON	10K	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R080	1-249-429-11	CARBON	10K	5%	1/4W
R084	1-249-424-11	CARBON	3.9K	5%	1/4W
R085	1-247-881-00	CARBON	120K	5%	1/4W
R086	1-249-429-11	CARBON	10K	5%	1/4W
R151	1-249-405-11	CARBON	100	5%	1/4W
R152	1-249-429-11	CARBON	10K	5%	1/4W
R153	1-249-433-11	CARBON	22K	5%	1/4W
R154	1-249-429-11	CARBON	10K	5%	1/4W
R155	1-249-418-11	CARBON	1.2K	5%	1/4W
R156	1-247-891-00	CARBON	330K	5%	1/4W
R157	1-249-421-11	CARBON	2.2K	5%	1/4W
R158	1-249-421-11	CARBON	2.2K	5%	1/4W
R160	1-249-405-11	CARBON	100	5%	1/4W
R162	1-249-425-11	CARBON	4.7K	5%	1/4W
R163	1-249-425-11	CARBON	4.7K	5%	1/4W
R164	1-249-413-11	CARBON	470	5%	1/4W
R172	1-249-422-11	CARBON	2.7K	5%	1/4W
R173	1-249-429-11	CARBON	10K	5%	1/4W
R180	1-249-419-11	CARBON	1.5K	5%	1/4W
R185	1-249-439-11	CARBON	68K	5%	1/4W
R186	1-249-441-11	CARBON	100K	5%	1/4W
R201	1-249-387-11	CARBON	3.3	5%	1/4W
R202	1-247-887-00	CARBON	220K	5%	1/4W
R203	1-249-411-11	CARBON	330	5%	1/4W
R204	1-247-739-11	CARBON	100	5%	1/2W
R401	1-247-804-11	CARBON	75	5%	1/4W
R402	1-247-804-11	CARBON	75	5%	1/4W
R403	1-247-804-11	CARBON	75	5%	1/4W
R404	1-247-804-11	CARBON	75	5%	1/4W
R405	1-249-411-11	CARBON	330	5%	1/4W
R406	1-249-411-11	CARBON	330	5%	1/4W
R407	1-249-411-11	CARBON	330	5%	1/4W
R408	1-249-431-11	CARBON	15K	5%	1/4W
R409	1-249-431-11	CARBON	15K	5%	1/4W
R410	1-249-407-11	CARBON	150	5%	1/4W
R411	1-249-407-11	CARBON	150	5%	1/4W
R412	1-249-407-11	CARBON	150	5%	1/4W
R413	1-249-425-11	CARBON	4.7K	5%	1/4W
R414	1-249-433-11	CARBON	22K	5%	1/4W
R415	1-215-858-00	METAL OXIDE	15	5%	1W (KV-M19TD ONLY)
R416	1-247-804-11	CARBON	75	5%	1/4W
R418	1-249-417-11	CARBON	1K	5%	1/4W
R419	1-249-425-11	CARBON	4.7K	5%	1/4W
R420	1-249-413-11	CARBON	470	5%	1/4W
R421	1-249-409-11	CARBON	220	5%	1/4W
R422	1-249-404-00	CARBON	82	5%	1/4W
R423	1-249-438-11	CARBON	56K	5%	1/4W
R424	1-249-437-11	CARBON	47K	5%	1/4W
R425	1-249-437-11	CARBON	47K	5%	1/4W
R426	1-249-405-11	CARBON	100	5%	1/4W
R427	1-247-804-11	CARBON	75	5%	1/4W
R428	1-249-432-11	CARBON	18K	5%	1/4W
R429	1-249-409-11	CARBON	220	5%	1/4W
R430	1-249-437-11	CARBON	47K	5%	1/4W
R431	1-249-441-11	CARBON	100K	5%	1/4W
R432	1-249-437-11	CARBON	47K	5%	1/4W
R434	1-249-415-11	CARBON	680	5%	1/4W
R431	1-249-441-11	CARBON	100K	5%	1/4W
R435	1-249-440-11	CARBON	82K	5%	1/4W
R436	1-249-409-11	CARBON	220	5%	1/4W
R437	1-249-429-11	CARBON	10K	5%	1/4W

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

D V (KV−M19TD ONLY)

REF.NO.	PART NO.	DESCRIPTION				REMARK
R441	1-216-375-00	METAL OXIDE	3.3 (KV-M19TD ONLY)	5%	2W	F
R444	1-249-411-11	CARBON	330	5%	1/4W	
R445	1-218-065-51	METAL OXIDE	180 (KV-M19D ONLY)	5%	2W	
R501	1-249-425-11	CARBON	4.7K	5%	1/4W	
R502	1-247-744-11	CARBON	270	5%	1/2W	
R503	1-215-867-00	METAL OXIDE	470	5%	1W	
R504	1-247-895-00	CARBON	470K	5%	1/4W	
R505	1-249-429-11	CARBON	10K	5%	1/4W	
R506	1-249-424-11	CARBON	3.9K	5%	1/4W	
R507	1-249-435-11	CARBON	33K	5%	1/4W	
R508	1-216-347-11	METAL OXIDE	0.68	5%	1W	F
R509	1-247-893-11	CARBON	390K	5%	1/4W	
R510	1-249-439-11	CARBON	68K	5%	1/4W	
R511	1-247-893-11	CARBON	390K	5%	1/4W	
R512	1-216-869-11	METAL OXIDE	1K	5%	1W	
R513	1-249-424-11	CARBON	3.9K	5%	1/4W	
R551	1-212-883-00	FUSIBLE	120	5%	1/4W	
R552	1-249-419-11	CARBON	1.5K	5%	1/4W	
R553	1-249-426-11	CARBON	5.6K	5%	1/4W	
R554	1-249-404-00	CARBON	82	5%	1/4W	
R555	1-249-423-11	CARBON	3.3K	5%	1/4W	
R556	1-249-418-11	CARBON	1.2K	5%	1/4W	
R558	1-249-417-11	CARBON	1K	5%	1/4W	
R559	1-249-434-11	METAL	27K	5%	1/4W	
R560	1-247-888-11	METAL	240K	5%	1/4W	
R561	1-249-412-11	CARBON	390	5%	1/4W	
R562	1-249-428-11	METAL	8.2K	5%	1/4W	
R563	1-249-417-11	CARBON	1K	5%	1/4W	
R564	1-249-410-11	CARBON	270	5%	1/4W	
R565	1-215-454-00	METAL	24K	1%	1/6W	
R567	1-249-441-11	CARBON	100K	5%	1/4W	
R569	1-249-431-11	CARBON	15K	5%	1/4W	
R571	1-249-436-11	CARBON	39K	5%	1/4W	
R572	1-249-405-11	CARBON	100	5%	1/4W	
R573	1-249-433-11	CARBON	22K	5%	1/4W	
R574	1-249-439-11	CARBON	68K	5%	1/4W	
R575	1-249-421-11	CARBON	2.2K	5%	1/4W	
R576	1-249-432-11	CARBON	18K	5%	1/4W	
R601 ⚠	1-205-909-11	WIREWOUND	3.3	5%	10W	
R602	1-214-931-00	CARBON	560K	5%	1/2W	
R603	1-215-903-11	METAL OXIDE	68K	5%	2W	
R604	1-247-750-11	CARBON	680	5%	1/2W	
R605 ⚠	1-247-289-11	CARBON	8.2M	5%	1W	
R606	1-212-877-11	FUSIBLE	68	5%	1/4W	
R608	1-216-449-11	METAL OXIDE	56	5%	2W	
R609	1-207-905-00	WIREWOUND	0.27	10%	2W	
R610	1-247-887-00	CARBON	220K	5%	1/4W	
R612	1-217-809-91	FUSIBLE	0.33	5%	1/4W	
R613	1-217-811-91	FUSIBLE	0.47	5%	1/4W	
R615	1-249-399-11	CARBON	33	5%	1/4W	
R617	1-216-354-11	METAL OXIDE	2.7	5%	1W	F
R801	1-217-811-91	FUSIBLE	0.47	5%	1/4W	
R802	1-205-642-00	WIREWOUND	3.3K	10%	5W	F
R804	1-217-822-91	FUSIBLE	4.7K	5%	1/4W	
R805	1-249-399-11	CARBON	33	5%	1/4W	
R806	1-249-421-11	CARBON	2.2K	5%	1/4W	
R807	1-212-877-11	FUSIBLE	68	5%	1/4W	
R808	1-216-347-11	METAL OXIDE	0.68	5%	1W	F
R822	1-249-440-11	CARBON	82K	5%	1/4W	
R823	1-217-820-91	FUSIBLE	3.3K	5%	1/4W	
R824	1-249-434-11	CARBON	27K	5%	1/4W	
R826	1-249-430-11	CARBON	12K	5%	1/4W	
R827	1-249-417-11	CARBON	1K	5%	1/4W	
R828	1-249-438-11	CARBON	56K	5%	1/4W	
R829	1-247-885-00	CARBON	180K	5%	1/4W	
R830	1-249-425-11	CARBON	4.7K	5%	1/4W	
R833	1-212-857-00	FUSIBLE	10	5%	1/4W	
R852	1-216-431-11	METAL OXIDE	560	5%	1W	
R854	1-217-811-91	FUSIBLE	0.47	5%	1/4W	
R855	1-202-830-00	SOLID	10K	10%	1/2W	
R856	1-217-825-11	FUSIBLE	8.2K	5%	1/4W	
R857	1-247-887-00	CARBON	220K	5%	1/4W	
R858	1-218-054-51	METAL OXIDE	22	5%	2W	

<VARIABLE RESISTOR>

RV401	1-238-163-11	RES, VAR, CARBON 10K
RV501	1-238-016-11	RES, ADJ, CARBON 10K
RV552	1-238-020-11	RES, ADJ, CARBON 100K
RV553	1-238-016-11	RES, ADJ, CARBON 10K
RV801	1-223-102-00	RES, ADJ, WIREWOUND 120
RV802	1-238-019-21	RES, ADJ, CARBON 47K

<SWITCH>

S001	1-571-532-21	SWITCH, TACTIL
S002	1-571-532-21	SWITCH, TACTIL
S003	1-571-532-21	SWITCH, TACTIL
S004	1-571-532-21	SWITCH, TACTIL
S005	1-571-532-21	SWITCH, TACTIL
S006	1-571-532-21	SWITCH, TACTIL
S007	1-571-532-21	SWITCH, TACTIL
S008	1-571-532-21	SWITCH, TACTIL
S009	1-571-532-21	SWITCH, TACTIL

<SPARK GAP>

SG801	1-519-422-11	GAP, SPARK

<TRANSFORMER>

T601 ⚠	1-449-275-12	S.R.T
T603 ⚠	1-421-776-11	LFT
T604 ⚠	1-424-078-11	TRANSFORMER, TRIGGER PULSE
T605 ⚠	1-421-862-11	LFT
T801	1-437-078-00	TRANSFORMER, HORIZONTAL DRIVE
T851 ⚠	1-439-432-11	TRANSFORMER ASSY, FLYBACK

<THERMISTOR>

TH601 ⚠	1-808-059-31	THERMISTOR, POSITIVE

<TUNER>

TU101 ⚠	1-463-881-11	TUNER, ET (UV-617)

<IF BLOCK>

VIF101	1-464-960-11	IF BLOCK (IFG-389)

****

*A-1347-031-A	V BOARD, COMPLETE (KV-M19TD ONLY)	
**********		
*4-380-698-01	CASE (MAIN), SHIELD, A1	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

V

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*4-380-699-01	CASE (UPPER LID), SHIELD, A1			
	*4-382-701-01	CASE (BOTTOM LID), SHIELD, A2			
		<CAPACITOR>			
C02	1-124-120-11	ELECT	220MF	20% 16V	
C03	1-124-119-00	ELECT	330MF	20% 16V	
C05	1-126-101-11	ELECT	100MF	20% 16V	
C06	1-124-120-11	ELECT	220MF	20% 16V	
C07	1-124-499-11	ELECT	1MF	20% 50V	
C08	1-163-097-00	CERAMIC CHIP	15PF	5% 50V	
C09	1-163-141-00	CERAMIC CHIP	0.001MF	10% 50V	
C10	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C11	1-163-037-11	CERAMIC CHIP	0.022MF	10% 25V	
C12	1-163-127-00	CERAMIC CHIP	270PF	5% 50V	
C13	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C14	1-163-097-00	CERAMIC CHIP	15PF	5% 50V	
C15	1-163-103-00	CERAMIC CHIP	27PF	5% 50V	
C16	1-163-021-00	CERAMIC CHIP	0.01MF	10% 50V	
C17	1-163-809-11	CERAMIC CHIP	0.047MF	10% 25V	
C18	1-163-099-00	CERAMIC CHIP	18PF	5% 50V	
C19	1-163-809-11	CERAMIC CHIP	0.047MF	10% 25V	
C20	1-163-125-00	CERAMIC CHIP	220PF	5% 50V	
C21	1-163-833-00	CERAMIC CHIP	0.068MF	25V	
C24	1-126-101-11	ELECT	100MF	20% 16V	
C25	1-124-477-11	ELECT	47MF	20% 16V	
C27	1-163-129-00	CERAMIC CHIP	330PF	5% 50V	
C28	1-163-137-00	CERAMIC CHIP	680PF	10% 50V	
C29	1-124-927-11	ELECT	4.7MF	20% 50V	
C51	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C52	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C53	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C54	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C55	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C56	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C57	1-163-141-00	CERAMIC CHIP	0.001MF	10% 50V	
C58	1-163-141-00	CERAMIC CHIP	0.001MF	10% 50V	
C59	1-163-141-00	CERAMIC CHIP	0.001MF	10% 50V	
		<CONNECTOR>			
CNV01	*1-565-393-11	CONNECTOR, BOARD TO BOARD			
CNV02	*1-565-393-11	CONNECTOR, BOARD TO BOARD			
CNV03	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
		<TRIMMER>			
CT01	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)			
		<DIODE>			
D01	8-719-400-47	DIODE MA3056M			
D02	8-719-400-95	DIODE MA3130L			
D03	8-719-914-43	DIODE DAN202K			
D04	8-719-420-42	DIODE MA3036H			
D07	8-719-400-63	DIODE MA3068M			
D08	8-719-400-63	DIODE MA3068M			
D09	8-719-914-43	DIODE DAN202K			
D10	8-719-914-43	DIODE DAN202K			
D11	8-719-914-44	DIODE DAP202K			
D12	8-719-914-44	DIODE DAP202K			
		<IC>			
IC1	8-759-972-41	IC MAB8461P-W136			
IC2	8-759-972-96	IC SAA5231-V6			
IC3	8-759-946-85	IC SAA5243E			
IC4	8-759-230-68	IC TMM2063P-70			
		<COIL>			
L01	1-408-411-00	INDUCTOR	15UH		
L04	1-408-407-00	INDUCTOR	6.8UH		
L05	1-408-407-00	INDUCTOR	6.8UH		
L06	1-408-407-00	INDUCTOR	6.8UH		
		<IC LINK>			
PS01 ⚠	1-532-679-91	LINK, IC 0.6A			
PS02 ⚠	1-532-727-91	LINK, IC 0.25A			
		<TRANSISTOR>			
Q01	8-729-904-27	TRANSISTOR 2SD1761-E			
Q02	8-729-202-06	TRANSISTOR 2SC2873Y			
Q03	8-729-900-53	TRANSISTOR DTC114EK			
Q04	8-729-271-22	TRANSISTOR 2SC2712G			
Q05	8-729-202-06	TRANSISTOR 2SC2873Y			
Q06	8-729-271-22	TRANSISTOR 2SC2712G			
Q07	8-729-900-98	TRANSISTOR DTC143TK			
Q09	8-729-800-68	TRANSISTOR 2SB815B6			
Q10	8-729-800-68	TRANSISTOR 2SB815B6			
Q11	8-729-800-68	TRANSISTOR 2SB815B6			
		<RESISTOR>			
R01	1-218-326-91	METAL GLAZE	470	1/2W	
R02	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R04	1-218-326-91	METAL GLAZE	470	1/2W	
R05	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R06	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R07	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R08	1-216-037-00	METAL GLAZE	330	5% 1/10W	
R09	1-216-091-00	METAL GLAZE	56K	5% 1/10W	
R13	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R14	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R15	1-216-121-00	METAL GLAZE	1M	5% 1/10W	
R16	1-216-055-00	METAL GLAZE	1.8K	5% 1/10W	
R17	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R18	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R19	1-216-037-00	METAL GLAZE	330	5% 1/10W	
R20	1-216-043-00	METAL GLAZE	560	5% 1/10W	
R27	1-216-013-00	METAL GLAZE	33	5% 1/10W	
R28	1-216-013-00	METAL GLAZE	33	5% 1/10W	
R29	1-216-013-00	METAL GLAZE	33	5% 1/10W	
R30	1-218-325-91	METAL GLAZE	120	1/4W	
R31	1-218-325-91	METAL GLAZE	120	1/4W	
R32	1-218-325-91	METAL GLAZE	120	1/4W	
R33	1-216-023-00	METAL GLAZE	82	5% 1/10W	
R34	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R37	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R38	1-216-047-00	METAL GLAZE	820	5% 1/10W	
R40	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R41	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R43	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R44	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R45	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R46	1-216-311-00	METAL GLAZE	6.8	5% 1/10W	
R51	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R52	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R53	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R54	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R55	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R56	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R57	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R58	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R59	1-216-056-00	METAL GLAZE	2K	5%	1/10W	
R60	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R61	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R62	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R63	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R64	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R65	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R66	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R67	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R68	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R69	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
		<VARIABLE RESISTOR>				
RV01	1-238-009-11	RES, ADJ, CARBON 220				
		<CRYSTAL>				
X01	1-567-162-21	OSCILLATOR, CRYSTAL				
X02	1-567-495-21	OSCILLATOR, CRYSTAL				
X03	1-577-082-11	VIBRATOR, CERAMIC				

****

MISCELLANEOUS
****

⚠	1-451-279-21	DEFLECTION YOKE (SY165)	
	1-452-032-00	MAGNET, DISK; 10MM ϕ	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
	1-452-277-00	MAGNET, BMC	
	1-503-258-21	SPEAKER	
⚠	1-559-346-11	CORD, POWER (WITH CONNECTOR)	
L901 ⚠	1-426-359-31	COIL, DEMAGNETIZATION	
V901 ⚠	8-737-951-05	PICTURE TUBE (A46JNL10X)	

****

ACCESSORIES AND PACKING MATERIALS
****

PART NO.	DESCRIPTION	REMARK
A-1470-839-A	COMMANDER ASSY (RM-658)	(KV-M19D ONLY)
A-1470-840-A	COMMANDER ASSY (RM-657)	(KV-M19TD ONLY)
*4-377-015-01	BAG, PROTECTION	
4-482-590-11	MANUAL, INSTRUCTION	
*4-389-383-01	CUSHION (UPPER) (ASSY)	
*4-389-384-01	CUSHION (LOWER) (ASSY)	
*4-389-385-01	INDIVIDUAL CARTON	

9-964-154-01

Sony Corporation
TV Group

English
8811J0243-1
Printed in Japan
©1988.9